PLATICHA, R. Czech CA: 47:11830

Agr. Forestry High School, Prague

"(Polarographic) determination of Diacetyl."

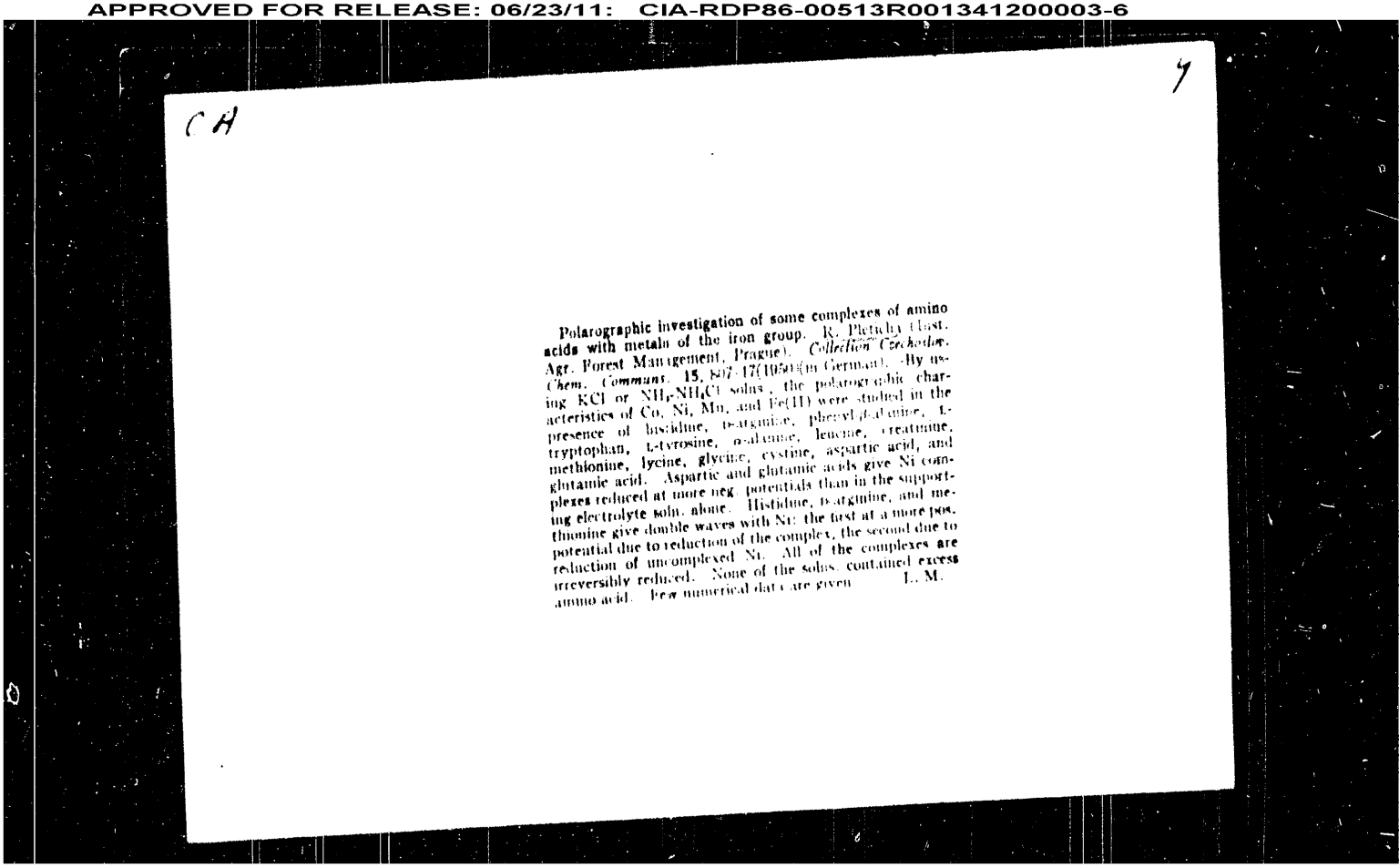
Sbornik Mezinarod. polarog. Sjezdu Praze, 1st Congr. 1951, Pt. III, Proc. 580-9 (in Czech), 569-72 (in Russian), 572-5 (in German); cf. CA 46, 11Chia.

PLESICKA, R. Czech CA: 47:11033

Charles Univ., Prague

"(Polarographic study of) some complexes of amino acids with metals."

Sborník Mezinárod. Polarog. Sjezdu Praze, 1st Congr. 1951, Pt. III, Proc., 530-4 (in Czech), 536-9 (in Russian), 539-41 (in German); cf. CA 46, 3074g.



CH

7

Polarographic investigation of some complexes of amino acids with metals of the iron group. K. Plotnický (Inst. Agr. Forest Management, Prague). *Collection Czechoslov. Chem. Communs.* **15**, 807–17(1950)(in German). -By using KCl or NH_4-NH_4Cl solns., the polarographic characteristics of Co, Ni, Mn, and Fe(II) were studied in the presence of histidine, L-arginine, phenylalanine, L-tryptophan, L-tyrosine, α-alanine, leucine, creatinine, methionine, lycine, glycine, cystine, aspartic acid, and glutamic acid. Aspartic and glutamic acids give Ni complexes reduced at more neg. potentials than in the supporting electrolyte soln. alone. Histidine, L-arginine, and methionine give double waves with Ni: the first at a more pos. potential due to reduction of the complex, the second due to reduction of uncomplexed Ni. All of the complexes are irreversibly reduced. None of the solns. contained excess amino acid. Few numerical data are given. L. M.

Pleti, Z.

POL. 6

Investigation of the time of formation of calcinated phosphate. J. Bereski, E. Gryglik, F. Kammer, St. Mrowec, Z. Pleti, and T. Westfalewicz. *Przemysł Chem.*, 9, 373-4 (1953). (English summary).—Expts. on the lab. and pilot-plant scale showed that the output of rotary kilns and production of the fertilizer can be increased by establishing 20 min. as the time of reaction. Gene A. Wozny

AG (5)

PLETERSKI Miroslav, major dr.

Humoral syndrome in war surgery. Voj. san. pregl., Beogr. 11 no. 11-12:672-678 Nov-Dec 54.

1. Hirursko odeljenje Vojne bolnice u Ljubljani.
(BODY FLUIDS
humoral synd., prev. & ther. in war surg.)
(SODIUM CHLORIDE, defic.
prev. & ther. in war surg.)
(DEHYDRATION
prev. & ther. in war surg.)
(MEDICINE, MILITARY AND NAVAL
prev. & tehr. of humoral synd. in war surg.)

PLETERSKI, M.

On rigid [illegible] in [illegible] of [illegible]. Vojnosanit. Pregl. 21 no.3:165-171, 1964.

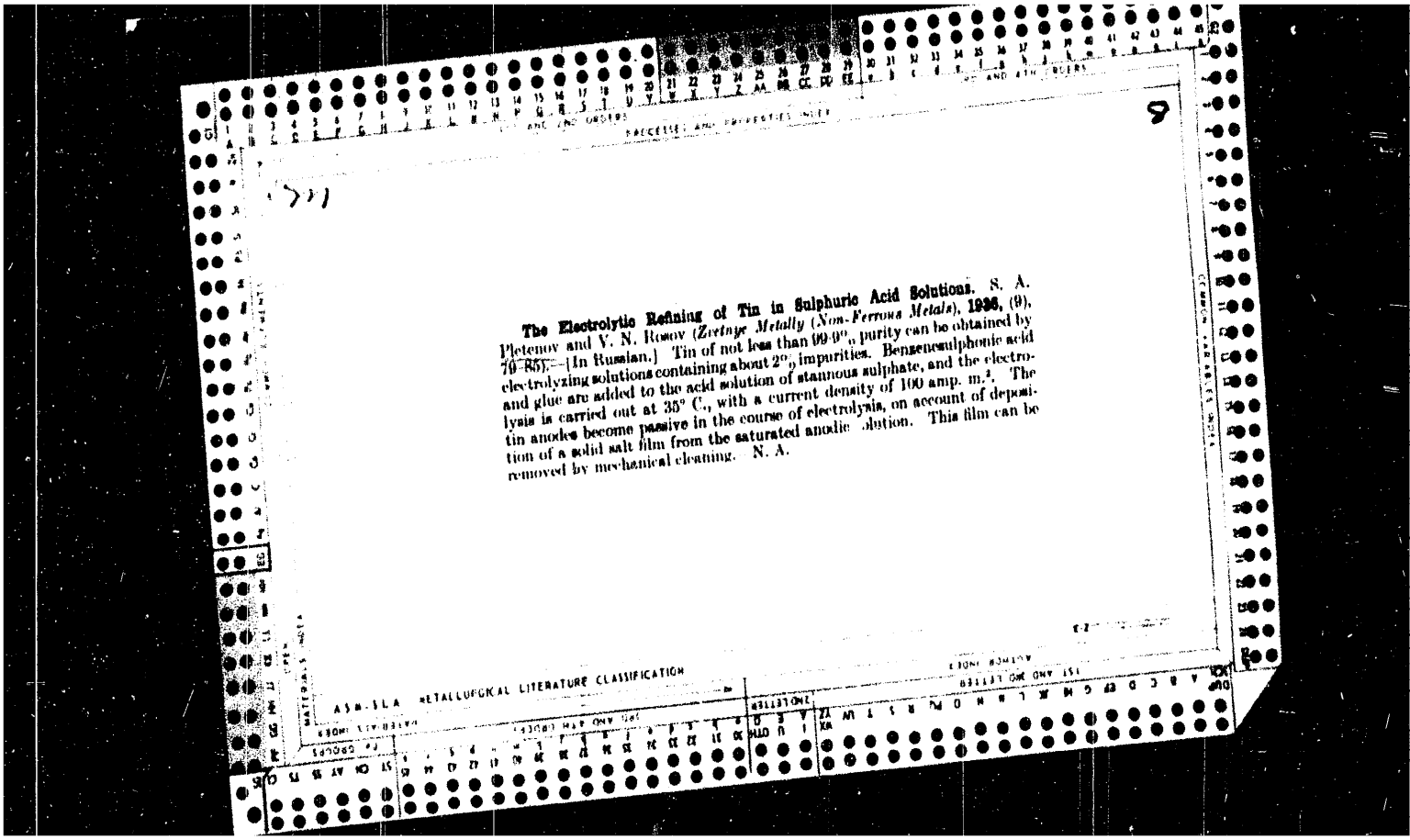
1. Vojna bolnica u Ljubljani.

PLETENEVOY, N. B. (State Institute of Nonferrous Metals)

"A method of continuous receipt of bases for electrolysis of copper of high current densities with application of drum and loop electrolyzers, allowing receipt of continuous copper tape of thickness up to 0.6 mm" - and refining of copper with application of electrolyzers of channel and direct-current type, allowing considerably to intensify the process in stationary baths. Electrolyzers of direct-current type are used successfully at present on BGMK.

Report presented at the Intervuz Conference on Electrodeposition of Nonferrous Metals, Ural Polytechnical Institute Im S. M. Kirov, Sverdlovsk, held from 27-30 May 1963

(Reported in Tsvetnyye Metally, No. 10, 1963, pp. 82-84)
JPRS 24,651 19 May 1964



The Electrolytic Refining of Tin in Sulphuric Acid Solutions. S. A. Pletenov and V. N. Rosov (*Zvetnye Metally* (*Non-Ferrous Metals*), **1936**, (9), 70–85).—[In Russian.] Tin of not less than 99·9% purity can be obtained by electrolyzing solutions containing about 2% impurities. Benzenesulphonic acid and glue are added to the acid solution of stannous sulphate, and the electrolysis is carried out at 35° C., with a current density of 100 amp. m.$^{-2}$. The tin anodes become passive in the course of electrolysis, on account of deposition of a solid salt film from the saturated anodic solution. This film can be removed by mechanical cleaning. N. A.

1. PETROV S. A.; SOSUNOV, S. I.

2. USSR (60-)

"The Mechanism of the Dissolving of Metals in Acids in the Presence of Oxidizing Agents," Zhur. Fiz. Khim., 32, No. 7, 1958. Moscow Polytechnical Institute, Dept. of Physical and Colloidal Chemistry. Received 7 January 1957.

9. [redacted] Report U-1015, 3 Jun 1958

PLETEN'OV, O.V.

Importance of the origin of seeds in the introduction of exotic plants. Visnyk Bot. sada AN URSR no. 2:33-39 '60. (MIRA 14:4)
(Ukraine--Plant introduction)

KHEYFETS, L.B.; SALMIN, L.V.; LEYTMAN, M.Z.; KUZ'MINOVA, M.L.; VASIL'YEVA, A.V.; GAL'PERIN, I.P.; SLAVINA, A.M.; ZHDANOVA, L.D. PLETNEVA, O.G.; VARSANOVA, Ye.Ya.; GINZBURG, G.M.; GLYAZER, N.G.; MEL'NIK, Ye.Yu.

Comparative evaluation of typhoid fever vaccine prepared by various methods, materials from an epidemiological experiment in 1961. Zhur. mikrobiol., epid. i imm. 41 no. 2:70-76 F '64. (MIRA 17:9)

1. Moskovskiy institut vaktsin i syvorotok imeni Mechnikova, Tashkentskiy institut vaktsin i syvorotok i Ashkhabadskiy institut epidemiologii, mikrobiologii i gigiyeny.

MUROMOVA, R.S.; PLETNEVA, I.D.; DEMIDOVA, T.V.; PERVUKHINA, I.V.; TOKAREVA, G.A.

Synthesis and polycondensation of cis- and trans-isomers of β-(3-aminocyclohexyl)propionic acid. Vysokom.soed. 7 no.7:1283-1287 Jl '65. (MIRA 18:8)

1. Gosudarstvennyy nauchno-issledovatel'skiy i proyektnyy institut azotnoy promyshlennosti i produktov organicheskogo sinteza.

PLETNEV, G.P., kand. tekhn. nauk; SKLEBUSHEVSKIY, B.S., inzh.; PENKIN, V.M., inzh.

Experimental dynamic characteristics of the regulated sectors of TP-80 boiler and VPT-50 turbine units. Teploenergetika 12 no.7:90-92 Jl '65. (MIRA 18:7)

1. Moskovskiy energeticheskiy institut i Moskovskoye rayonnoye upravleniye energeticheskogo khozyaystva.

32782

S/137/61/000/012/050/149
A006/A101

The use of sulfamine electrolyte for...

contained in %: Cu < 0.0001, Ag < 0.0001, Bi < 0.0001, As < 0.0001, Sb < 0.0001, Zn < 0.0001.

G. Svodtseva

[Abstracter's note: Complete translation]

Card 2/2

32782
S/137/61/000/012/050/149
A006/A101

18.3100 1521

AUTHORS: Pleteneva, N., B., Globa, T.

TITLE: The use of sulfamine electrolyte for the preparation of pure lead

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 12, 1961, 32, abstract 120229 ("Sb. tr. Gos. n.-i. in-t tsvetn. met", 1959, no. 15, 492 - 496)

TEXT: Electrolytical refining of Pb was conducted in sulfamine electrolyte containing 70 - 80 g/l Pb and 60 - 70 g/l free sulfamine acid. Pure resorcin (2 g/l) and gelatin (1 - 1.5 g/l) were introduced as admixtures. Refining was made with Pb containing in %: Cu 0.00046 - 0.00047, Ag 0.0017, Bi 0.005, Zn < 0.0006, As, Sb and Sn < 0.00005. The anodes were placed in glass fiber bags. Stainless steel plates 1.5 - 2 mm thick, were used as cathodes. Voltage during electrolysis with a diaphragm and glass bags on the anodes was 0.8 - 1.2 v, at 28 - 30 C electrolyte temperature; the distance between anode axes was 125 - 130 mm and D_a 120 - 140 amp/m^2. During electrolysis (8 days) the voltage in the cell varied slightly. Electrolysis with deep refining of the electrolyte under the aforementioned conditions yielded Pb of high purity. In remelted state it

Card 1/2

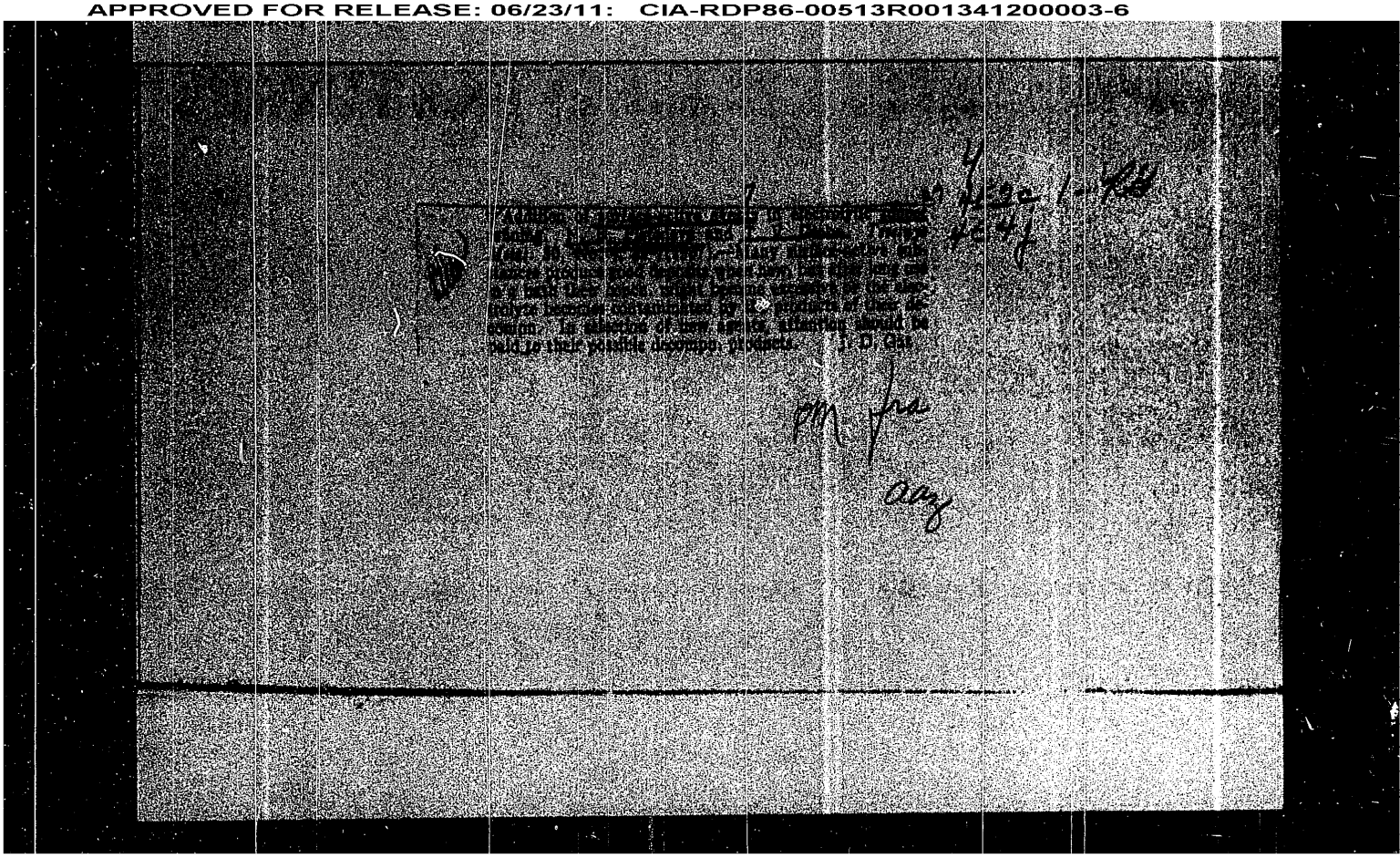
PLETENEVA, N.B.; GLOBA, T.V.

Electrolytic refining of lead in a sulfamine electrolyte (review of research made by the State Research Institute of Nonferrous Metals). Sbor. nauch. trud. GINTSVETMET no.15:497-510 '59. (MIRA 14:4)
(Lead--Electrometallurgy)

PLETENEVA, N.B.; GLOBA, T.V.

Use of a sulfamine electrolyte for the preparation of pure lead. Sbor. nauch. trud. GINTSVETMET no.15:492-496 '59. (MIRA 14:4)

(Lead--Electrometallurgy)



PLETENEVA, N.B.; GLOBA, T.V.

[redacted]

Addition of surface-active substances in the electrolytic refining of copper. TSvet. met. 30 no.4:32-37 Ap '57. (MLRA 10:6)
(Copper--Electrometallurgy) (Surface-active agents)

136-4-7/23

AUTHOR: Pleteneva, N.B. and Globa, T.V.

TITLE: Additions of surface active substances in the electrolytic refining of copper. (O dobavkakh poverkhnostno aktivnykh veshchestv pri elektroliticheskom rafinirovanii medi.)

PERIODICAL: "Tsvetnye Metally" (Non-ferrous Metals) 1957, V 30, No. 4, pp. 32 - 37 (U.S.S.R.)

ABSTRACT: In this article material from the recent book by Butts ((cited) Butts. Copper, monograph, New York, 1954) on the use of surface active agents in electrolytic refining of copper abroad is tabulated and briefly discussed and original work on this subject described. This work was carried out by Gintsvetmet organisation and consisted in the study of the microstructure of cathodic copper obtained in the presence of various surface active agents. Both pure and works electrolytes were used, the latter being pre-used so as to eliminate the accumulation of surface active agents used at the works. During this it was found that the quality of the deposits improved progressively, and it is concluded that the works electrolyte contained an excess of surface active agents or their decomposition products and this is suggested as the field for research work. A periodic cessation of surface-active agent additions so as to eliminate accumulations is recommended for

Card 1/2

PLETNEVA, N.B.; GLOBA, T.V.

Effect of surface-active additives on electrolytic lead refining. (MLRA 9:8)
TSvet.met. 29 no.4:49-54 Ap '56.
(Lead--Electrometallurgy)

PLETENEVA, N. B

Refining crude lead at the San Gavino plant in Monreale. TSvet. met. 31 no.4:87-92 Ap '58. (MIRA 11:5)
(Italy--Lead--Electrometallurgy)

137-58-4-6830

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 4, p 74 (USSR)

AUTHORS: Pleteneva, N.B., Globa, T.V.

TITLE: Producing High-purity Lead (Polucheniye svintsa vysokoy chis-toty)

PERIODICAL: Byul. Tsentr. in-t informats. M-va tsvetn. metallurgii SSSR, 1957, Nr 1, pp 13-14

ABSTRACT: High-purity lead was obtained by electrolytic refining of Pb in a bath with a diaphragm separating the cathode and anode spaces, and by extreme purification of the catholyte. The Pb subjected to refining had the following % composition: 0.00046 Cu, 0.0017 Ag, 0.005 Bi, < 0.0006 Zn, Zn and As, Sb and Sn (0.0005). Electrolysis was performed in a sulfamine electrolyte containing up to 70-80 g Pb and 60-70 g free sulfaminic acid per liter. The electrolysis was performed in a glass bath of 4 liters capacity. The plates were kept in fiberglass sacks. The cathodes consisted of 1.5-2 mm EYa-1T stainless sheet steel. The electrolyte was cleansed in porcelain beakers at 40-50°C with stirring. The plate voltage in electrolysis was 0.8-1.2 v at 28-30° electrolyte temperature, with 125-130 mm between plates, and D_a 120-140

Card 1/2

S/080/60/033/009/003/021
A003/A001

AUTHORS: Yukhtanov, D.M., Pleteneva, N.B.

TITLE: The Production of High-Purity Selenium

PERIODICAL: Zhurnal prikladnoy khimii, 1960, Vol. 33, No. 9, pp. 1951-1957

TEXT: The production of pure selenium from commercial selenium with 97.3% Se and from selenium with 99.99% Se was investigated. Commercial selenium contains a considerable amount of tellurium, the separation of which from selenium presents difficulties, because both elements are very similar. The separation is carried out by sublimation of the dioxides of the two metals. Commercial selenium is transformed to dioxide by burning in a flow of oxygen or a mixture of oxygen and nitrogen oxides. The burning temperatures used in the experiment were 500 and 560°C. The optimum conditions were found to be 560°C and an oxygen consumption of 1,000 ml/min. The stoichiometric oxygen consumption is 405 g per 1 kg of selenium. The actual consumption is 1 kg of oxygen, i.e., 250% of the theoretical. 99.99% selenium needs less oxygen and the burning is faster. At 560°C and a consumption of 500 ml/min the burning rate of 99.99% selenium is 100 g/hour, of commercial selenium 15 g/hour. The sublimation of selenium di-

Card 1/2

PLETENEVA, N.B.

PLETENEVA, N.B., kand.tekhn.nauk; GLOBA, T.V., nauchnyy sotrudnik.

Effect of the chlorine-ion on the lectrolytic refining of lead. (MIRA 10:10)
TSvet.met. 27 no.5:53-54 S-O '54.

1. Gintsvetmet. (Chlorine) (Lead--Electrometallurgy)

PLETENEVA, N.B., kand.tekhn.nauk.

Causes for varying behavior of anode slime in the electrolytic refining of lead. TSvet.met. 27 no.2:14-20 Mr-Ap '54. (MIRA 10:10)
(Lead--Electrometallurgy)

PLETENEVA, N. B.

"Investigation of the Anodic Passivation of Tin." Cand Tech Sci, Moscow Inst of Nonferrous Metals and Gold imeni M. I. Kalinin

Summary 71, 4 Sep 52, Dissertations Presented for Degrees in Science and Engineering in Moscow in 1950. From Vechernyaya Moskva. Jan-Dec 1950.

S/136/61/000/001/003/010
E193/E583

AUTHOR: Pleteneva, N. B.

TITLE: Methods of Preparation of High Purity Selenium

PERIODICAL: Tsvetnyye metally, 1961, No.1, pp.55-60

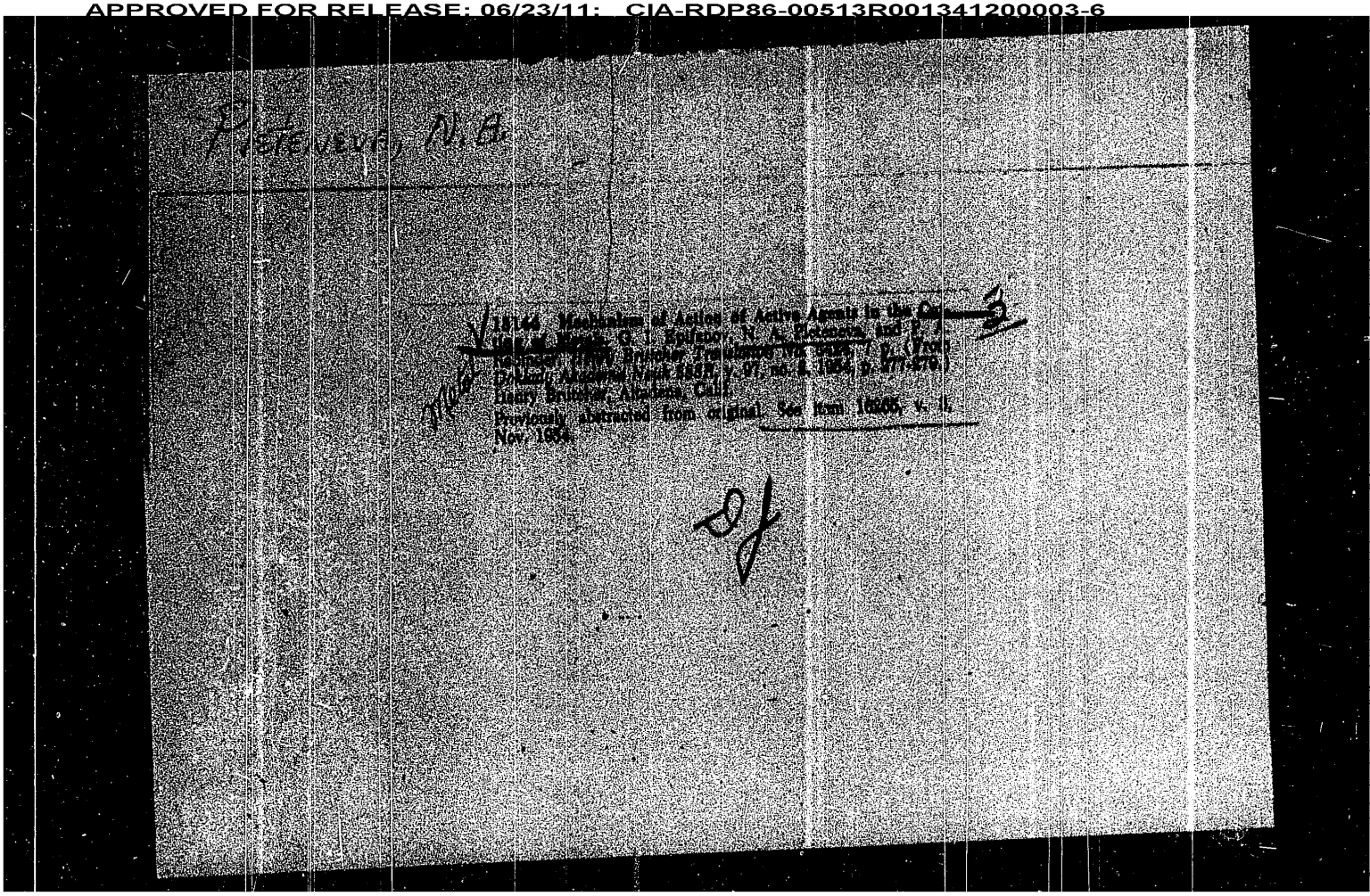
TEXT: Based on previously published information, this is a general review of the refining techniques, used both in the Soviet Union and abroad, for the preparation of high-purity selenium. The author shows that distillation (either in oxygen-free nitrogen or in vacuum) of commercial grade tellurium- and arsenic-free selenium is the refining technique most widely used abroad. So-called spectrographically pure selenium is produced by this method which at the Mansfeld Plant (Germany), yields metal of 99.995% purity. Vacuum distillation is the final stage of all the refining techniques developed in the Soviet Union. Some of the difficulties in obtaining selenium of 99.999% (or better) purity are due to the practice of using stainless steel distillation apparatus; quartz or heat-resistant glass should be used for this purpose. There are 1 table and 18 references: 9 Soviet and 9 non-Soviet.

Card 1/1

YUKHTANOV, D.M.; PLETNEVA, N.B.

Preparation of high-purity selenium. Zhur. prikl. khim. 33 no.9: 1951-1957 S '60. (MIRA 13:10)

(Selenium)



PLETENEVA, N.B.

Method of preparing high-purity selenium. TSvet. met. 34 no.1: 55-60 Ja '61. (MIRA 17:3)

PLETENEVA, N.A.; YEPIFANOV, G.I.

Effectiveness of the action of liquid media in the cutting of noble metals. Dokl. AN SSSR 110 no.3:414-416 S '56. (MLRA 9:12)

1. Institut fizicheskoy khimii Akademii nauk SSSR.
Predstavleno akademikom P.A. Rebinderom.
(Cutting fluids) (Precious metals)

PLETENEVA, N. A.

The effectiveness of liquid media in the cutting of noble metals. N. A. Pleteneva and G. I. Epifanov. *Doklady Akad. Nauk S.S.S.R.* 110, 414-16(1956); cf. *C.A.* 48, 8051g.—The effectiveness of nonpolar hydrocarbons, water, alcs., acids, esters, and CCl_4 in the cutting of Ag, Au, and Pt was defined as the ratio $\alpha = A_0/A$, where A_0 is the work of cutting the dry metal and A is the work of cutting the metal immersed in the different media. The results showed that the α-values were nearly the same for Ag and Au, and relatively low, while the α value for Pt was high; nonpolar hydrocarbons, acids, and esters reduced the work to nearly 1/2 the original value, CCl_4 to nearly 1/4, and $PhNO_2$ and $PhNH_2$ to 1/6 to 1/7. The effectiveness of the media depended neither on their chem. activity nor on the activity of the metals, and was tentatively attributed to an intensification of the strengthening of the metals in the destruction zone through an intercalation of decompn. products of the medium into the metal lattice (C.A. 49, 8066a).

W. M. Sternberg

Category: USSR / Physical Chemistry - Surface phenomena. Adsorption. Chromatography. Ion exchange.

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 30196

and especially in the acid series; with equal n the effect of acids is more pronounced than that of alcohols. On the other hand the authors had shown previously (Dokl. AN SSSR 1951, 77, No 6), that with more active metals (Al, Cu, Fe) the effect of acids and alcohols is practically the same, and that it is less pronounced than with Pt. Hence, it follows that effectiveness of media, in cutting of metals, is not directly correlated with their chemical activity; their slight effect in the case of Ag and Au is due not to the chemical inertness of the metal, but to mechanical properties which are unfavorable to manifestation of the action of the medium. In particular, there are involved in these instances the extent of shrinkage of the chips and the degree of adsorptive plasticizing of the surface layers of the metal.

Card : 2/2

PLETENEVA, N. A.

Category: USSR / Physical Chemistry - Surface phenomena. Adsorption. B-12
Chromatography. Ion exchange.

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 30136

Author : Pleteneva N. A., Yepifanov G. I.
Inst : Academy of Sciences USSR
Title : Effectiveness of the Action of Media in Cutting of Noble Metals

Orig Pub: Dokl. AN SSSR, 1956, 110, No 3, 414-416

Abstract: A study of the effects of water and organic liquids (hydrocarbons, alcohols, acids, esters, CCl_4) on the process of cutting Ag, Au and Pt. The effectiveness of cutting action was evaluated on the basis of the ratio of dry cutting action (A_0) and cutting action in the given medium (A_l). It was found that with Ag and Au k has a relatively low value (k = 1.3 - 1.6), which is practically the same for all the liquids which were investigated. In the case of Pt k = 3 - 4. Effect of the length (n) of the hydrocarbon chains of the molecules is practically nil on cutting of Ag and Au, while with Pt the k decreases with increase of n in the alcohol series

-12-

Card : 1/2

PLETENEVA, N. A.

Category: USSR / Physical Chemistry - Surface phenomena. Adsorption. Chromatography. Ion exchange. B-13

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 30136

Author : Pleteneva N. A., Yepifanov G. I.
Inst : Academy of Sciences USSR
Title : Effectiveness of the Action of Media in Cutting of Noble Metals

Orig Pub: Dokl. AN SSSR, 1956, 110, No 3, 414-416

Abstract: A study of the effects of water and organic liquids (hydrocarbons, alcohols, acids, esters, CCl_4) on the process of cutting Ag, Au and Pt. The effectiveness of cutting action was evaluated on the basis of the ratio α of dry cutting action (A_0) and cutting action in the given medium (A). It was found that with Ag and Au α has a relatively low value ($\alpha \approx 1.2 - 1.6$), which is practically the same for all the liquids which were investigated. In the case of Pt $\alpha = 3 - 4$. Effect of the length (n) of the hydrocarbon chains of the molecules is practically nil on cutting of Ag and Au, while with Pt the α decreases with increase of n in the alcohol series

Card : 1/2

L 13832-63 EWP(q)/EWT(m)/BDS AFFTC/ASD JD/JG

ACCESSION NR: AP3003562 S/0020/63/151/002/0384/0387

AUTHORS: Platenova, N. A.; Fedoseyeva, N. P.

TITLE: Effect of temperature on the diffusion of mercury in zinc

SOURCE: AN SSSR. Doklady, v. 151, no. 2, 1963, 384-387

TOPIC TAGS: mercury, zinc, diffusion coefficient

ABSTRACT: Direct methods were used to determine the dependence on temperature of the coefficient of diffusion of mercury in zinc. The functional relation between the temperature and the coefficient of exchange (surface) diffusion is given by the figure in the enclosure. The paper was presented by Academician P. A. Rebinder on 30 March 1963. Orig. art. has: 2 figures and 2 tables.

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry, Academy of Sciences SSSR)

SUBMITTED: 26Mar63 DATE ACQ: 30Jul63 ENCL: 01

SUB CODE: PH, CH NO REF SOV: 005 OTHER: 001

Card 1/2

PLETENEVA, N.A.; FEDOSEYEVA, N.P.

Effect of temperature on the diffusion of mercury in zinc. Dokl. AN SSSR 151 no.2:384-387 Jl '63. (MIRA 16:7)

1. Institut fizicheskoy khimii AN SSSR. Predstavlono akademikom P.A.Rebinderom.

(Mercury) (Diffusion) (Zinc)

KRUYT, H.R.; PLETNEVA, N.A., [translator]; TRAKHTMAN, N.N. [translator]; MISHIN, V.P., kandidat khimicheskikh nauk, redaktor; ARNOL'DOV, V.V., redaktor; IL'IN, B.M., tekhnicheskiy redaktor.

[Colloid science. Translated from the English] Nauka o kolloidakh. Perevod s angliiskogo N.A.Pletenevoi i N.N.Trakhtman. Pod. red. V.P.Mishina. Moskva. Izd-vo inostrannoi lit-ry.Pt.1. [Irreversible systems] Neobratimye sistemy. 1955. 533 p. (MLRA 9:4)
(Colloids)

PLETENEVA, N. A.

USSR/Chemistry - Physical Chemistry

Card 1/1

Authors : Epifanov, G. I., Pleteneva, N. A., and Rebinder P. A., Academician

Title : About the mechanism of the effect of active media during cutting of metals

Periodical : Dokl. AN SSSR, 97, Ed. 2, 277 - 279, July 1954

Abstract : The effect of active media is analogous to the effect of additions introduced into the metal for the purpose of improving its workability and includes only a narrow zone of disintegration. The idea about the cutting effect of active media serves as an aid in explaining the large experimental material regarding the effect of media on the deformation and disintegration processes of metals during the cutting. Cutting is the only process which produces a clear metal-surface free of any films or impurities. Thirteen references.

Institution : Acad. of Sc. USSR, Institute of Physical Chemistry

Submitted : March 30, 1954

Metallography and metallographic

C. a.
1951

The effectiveness of the action of liquid media in free shaving of metals. N. A. Pleteneva and G. I. Epifanov (Acad. Sci. U.S.S.R., Moscow). *Doklady Akad. Nauk S.S.S.R.* **77**, 1051-3(1951).- The sp. work of cutting, *A* (in kg./cc.), was detd. for a series of metals, in shaving at a cutting angle of 68° (58° with C), to a depth of 0.20 mm. for Al and Cu, 0.15 for Fe, Ni, and stainless steel, 0.30 for Sn, and 0.50 for Pb. In dry cutting (without liquid), the values, A_0, are: Al 90, Cu 90, Fe 270, Ni 180, Pb 5.7, Sn 11.3, stainless steel 280, heat-resistant alloy 300. Values of the ratio A_0/A in liquid media, in the same order of the metals, are: in nonpolar hydrocarbons, 1.4 1.7, 1.7 2.0, 0.88, 1.1, 1.4, 1.3, 0.84, 0.95; in H_2O, 1.7, 1.0, 2.0, 2.0, 1.5, 1.3, 1.1, 1.1; in MeOH, 3.5, 1.5, 1.7, 1.7, 1.5, 1.4, 1.1, 1.0; in EtOH, 4.5, 1.5, 1.9, 1.6, —, 1.3, 1.0, 1.0; in BuOH, 4.5, 1.8, 2.1, 1.4, 1.5, 1.4, 1.2, 1.0; in $C_5H_{11}OH$, 5.0, 1.9, 2.3, 1.4, —, 1.4, —, —; in AcOH, 2.0, 1.5, 2.4, 1.3, 1.2, 1.2, 1.0; in $BuCO_2H$, 3.1, 1.9, 2.4, 1.8, 1.3, 1.3, 1.3, 1.1; $C_4H_9CO_2H$, 4.0, 2.1, 2.3, 1.7, 1.3, 1.3, 1.4, 1.1; in oleic acid, 4.8, 2.1, 2.2, 1.6, 1.3, 1.5, 1.5, 1.1; in $EtCO_2Et$, 3.5, 1.7, 2.5, 1.7, 1.2, 1.3, 1.0, 0.97; in $BuCO_2Et$, 3.9, 1.7, 2.3, 1.6, 1.3, 1.3, 0.93, 1.0; in $C_4H_9CO_2Et$, 5.3, 1.9, 2.2, 1.5, 1.3, 1.3, 1.0, 1.0; in $AmCO_2Et$, 5.9, 1.9, 2.3, 1.4, 1.2, 1.3, 1.0, 1.0; in CCl_4, 5.0, 2.6, 2.8, 2.5, 0.7, 0.97, 1.8, 1.3. These data show the specificity of the effects of different liquids on different metals, and the diversity of the phenomena which obviously involve more factors than simple adsorption.

N. Thon

Oct 48

USSR/Metals
Aluminum
Cutting

"Increase in the Rigidity of Aluminum Upon Cutting, Depending on the Surface Activity of the Medium," N. A. Pleteneva, L. A. Shreyner, Acad P. A. Rebinder, Sec on Dispersed Systems, Inst of Phys Chem, Acad Sci USSR, 2½ pp

PA 53/49T73

"Dok Ak Nauk SSSR" Vol LXII, No 5

Drilling annealed aluminum increases rigidity of the metal at the point drilled. In an inactive medium, such as kerosene, increase was found to be about 2.5 times as high as in kerosene solutions of stearic acid. With progress of drilling, increase of the rigidity of the metal in contact with nonpolar media became more pronounced, but in the presence of 0.25% palmitic acid in kerosene it did not increase after the first millimeter drilled. Submitted 10 Jul 48.

53/49T73

PLETENEVA, N. A.

USSR/Engineering Oct 48
Cutting Fluids
Drilling

"Effect of a Surface Active Liquid on Cutting and Machining Processes," P. A. Rebinder, Yu. A. Klyachko, Acad P. A. Rebinder, Inst of Disperse Systems, Inst Phys Chem, Acad Sci USSR, 4 pp

"Dok Ak Nauk SSSR" Vol LXII, No 4

Discusses previously reported data obtained by authors. Also discusses effect of additives such as cetyl alcohol on kerosene vaseline oil and of propyl alcohol, heptyl alcohol or cetyl alcohol on kerosene used for drilling aluminum. Indicates the [redacted] 33/49T37

USSR/Engineering (Contd) Oct 48

significance of optimum amounts of these additives for most favorable effect on cutting operation. Thus, optimal action of propyl alcohol is obtained at concentration 5 - 6 mol/l, and that of cetyl alcohol or stearic acid at 0.01 mol/l. Submitted 10 Jul 48.

[redacted] 33/49T37

PLETENEVA, M. A.

USSR/Physics
Evaporation
Surfaces - Activation

Jan 1947

"The Effect of Surface-Active Substances on the Evaporation of Water Drops in the Spheroidal State, Part II," N. Pleteneva, P. Rehbinder, Academy of Sciences of the USSR, 11 pp

"Acta Physicochimica URSS" Vol XXII, No 1

A sharp decrease in the rate of evaporation is observed in the vicinity of the temperature at which the spheroidal state is reached. The invariance of the reciprocal rate of evaporation shows deviations in the case of aqueous solutions of

26T56

BS

USSR/Physics (Contd) Jan 1947

sodium oleate, which are given possible explanations. Addition of less volatile organic substances shifts the temperature at which the spheroidal state begins in the direction of higher temperatures, due to the increase in the evaporation rate of the drop.

PLETENEVA, N.

BS

26T56

AZOS, S.; AREF'YEV, A.; ARTAMONOV, I.; BABINA, I.; BERENGOVSKIY, V.; BLOZHKO, V.; BRAVERMAN, A.; BYKHOVSKIY, Yu.; VINOGRADOVA, M.; GALANKINA, Ye.; GIL'DENGERSH, F.; GLOBA, T.; GREYVER, N.; GORDON, G.; GUL'DIN, I.; GULYAYEVA, Ye.; GUSHCHINA, I.; DAVYDOVSKAYA, Ye.; DAMSKAYA, G.; DERKACHEV, D.; YEVDOKIMOVA, A.; YEGUNOV, V.; ZABELYSHINSKIY, I.; ZAYDENBERG, B.; AZMOSHNIKOV, I.; ITKINA, S.; KARCHEVSKIY, V.; KLUSHIN, D.; KUVINOV, Ye.; KUZNETSOVA, G.; KURSHAKOV, I.; LAKERNIK, M.; LEYZEROVICH, G.; LISOVSKIY, D.; LOSKUTOV, F.; MALEVSKIY, Yu.; MASLYANITSKIY, I.; MAYANTS, A.; MILLER, L.; MITROFANOV, S.; MIKHAYLOV, A.; MYAKINENKOV, I.; NIKITINA, I.; NOVIN, R.; OGNEV, D.; OL'KHOV, N.; OSIPOVA, T.; OSTRONOV, M.; PAKHOMOVA, G.; PETKER, S.; PLAKSIN, I.; PLETENEVA, N.; POPOV, V.; PRESS, Yu.; PROKOF'YEVA, Ye.; PUCHKOV, S.; REZKOVA, F.; RUMYANTSEV, M.; SAKHAROV, I.; SOBOL', S.; SPIVAKOV, Ya.; STRIGIN, I.; SPIRIDONOVA, V.; TIMKO, Ya.; TITOV, S.; TROITSKIY, A.; TOLOKONNIKOV, K.; TROFIMOVA, A.; FEDOROV, V.; CHIZHIKOV, D.; SHEYN, Ya.; YUKHTANOV, D.

Roman Lazarevich Veller; an obituary. TSvet. met. 31 no.5:78-79 My '58. (MIRA 11:6)

(Veller, Roman Lazarevich, 1897-1958)

PA 54T85

USSR/Physics — Nov/Dec 1946
Evaporation
Liquids

"Relations Governing the Evaporation of Liquids in the Spheroidal State: I," N. Pleteneva, P. Rebinder, Dept Dispersal Systems, Inst Phys Chem, Acad Sci USSR, Moscow, 16 pp

"Acta Physicochimica URSS" Vol XXI, No 6

Studies relation of the time for complete evaporation of liquid drop on heated metal surface to temperature showing time to be same for large variety of liquids. Analyzes and discusses this similarity for wide range of temperatures. Thickness of vapor coating around e

54T85

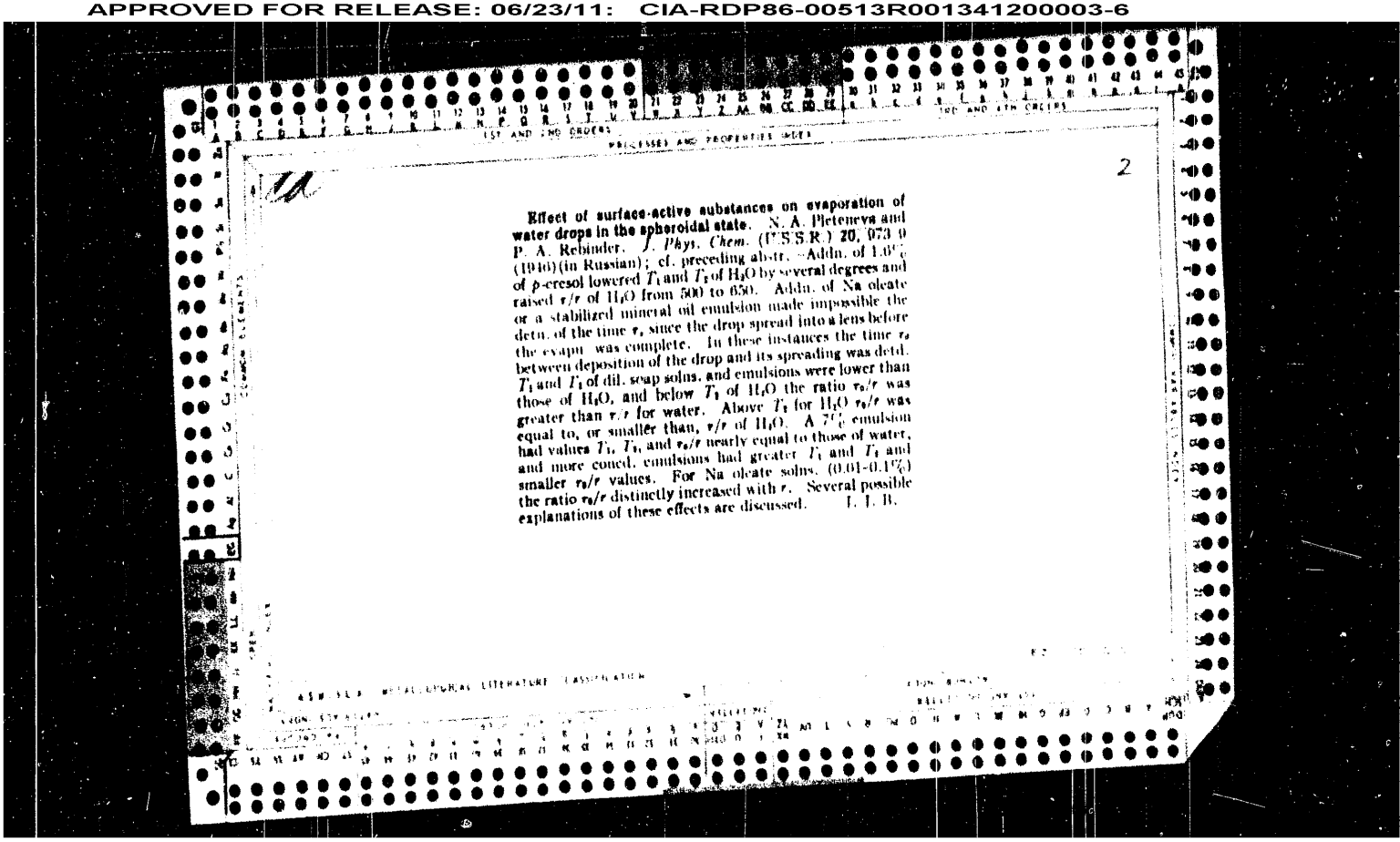
USSR/Physics (Contd) — Nov/Dec 1946

drop in spheroidal state for three liquids (water, methyl alcohol, and benzene) computed and found to correspond to a constant value of about 90/4 . Received, 20 Dec 1945.

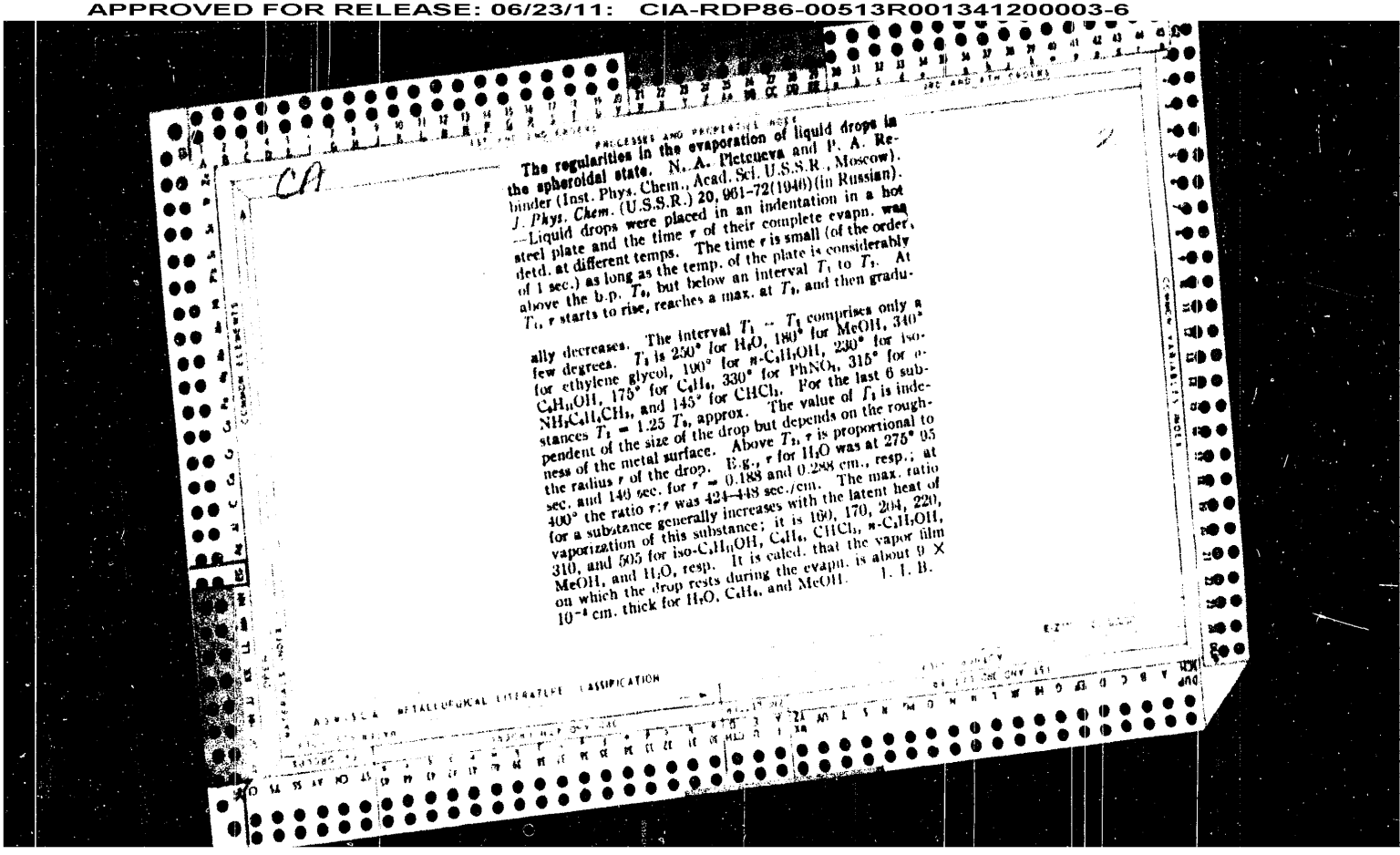
54T85

PLETENEVA, N.

[redacted]



Effect of surface-active substances on evaporation of water drops in the spheroidal state. N. A. Pletenev and P. A. Rebinder. *J. Phys. Chem.* (U.S.S.R.) **20**, 973-9 (1946)(in Russian); cf. preceding abstr.—Addn. of 1.0% of *p*-cresol lowered T_1 and T_2 of H_2O by several degrees and raised τ/r of H_2O from 500 to 650. Addn. of Na oleate or a stabilized mineral oil emulsion made impossible the detn. of the time τ, since the drop spread into a lens before the evapn. was complete. In these instances the time τ_0 between deposition of the drop and its spreading was detd. T_1 and T_2 of dil. soap solns. and emulsions were lower than those of H_2O, and below T_1 of H_2O the ratio τ_0/r was greater than τ/r for water. Above T_1 for H_2O τ_0/r was equal to, or smaller than, τ/r of H_2O. A 7% emulsion had values T_1, T_2, and τ_0/r nearly equal to those of water, and more concd. emulsions had greater T_1 and T_2 and smaller τ_0/r values. For Na oleate solns. (0.01-0.1%) the ratio τ_0/r distinctly increased with r. Several possible explanations of these effects are discussed. I. I. B.



The regularities in the evaporation of liquid drops in the spheroidal state. N. A. Pletneva and P. A. Rebinder (Inst. Phys. Chem., Acad. Sci. U.S.S.R., Moscow). *J. Phys. Chem.* (U.S.S.R.) 20, 961–72(1946)(in Russian). —Liquid drops were placed in an indentation in a hot steel plate and the time τ of their complete evapn. was detd. at different temps. The time τ is small (of the order of 1 sec.) as long as the temp. of the plate is considerably above the b.p. T_0, but below an interval T_1 to T_3. At T_0, τ starts to rise, reaches a max. at T_3, and then gradually decreases. The interval $T_1 - T_3$ comprises only a few degrees. T_3 is 250° for H_2O, 180° for MeOH, 340° for ethylene glycol, 190° for n-C_4H_9OH, 230° for iso-$C_5H_{11}OH$, 175° for C_6H_6, 330° for $PhNO_2$, 315° for o-$NH_2C_6H_4CH_3$, and 145° for $CHCl_3$. For the last 6 substances $T_3 = 1.25\ T_0$, approx. The value of T_3 is independent of the size of the drop but depends on the roughness of the metal surface. Above T_3, τ is proportional to the radius r of the drop. E.g., τ for H_2O was at 275° 95 sec. and 140 sec. for $r = 0.188$ and 0.288 cm., resp.; at 400° the ratio $\tau:r$ was 424–448 sec./cm. The max. ratio for a substance generally increases with the latent heat of vaporization of this substance; it is 160, 170, 204, 220, 310, and 505 for iso-$C_5H_{11}OH$, C_6H_6, $CHCl_3$, n-C_4H_9OH, MeOH, and H_2O, resp. It is calcd. that the vapor film on which the drop rests during the evapn. is about 9×10^{-4} cm. thick for H_2O, C_6H_6, and MeOH. I. I. B.

Dec 1946

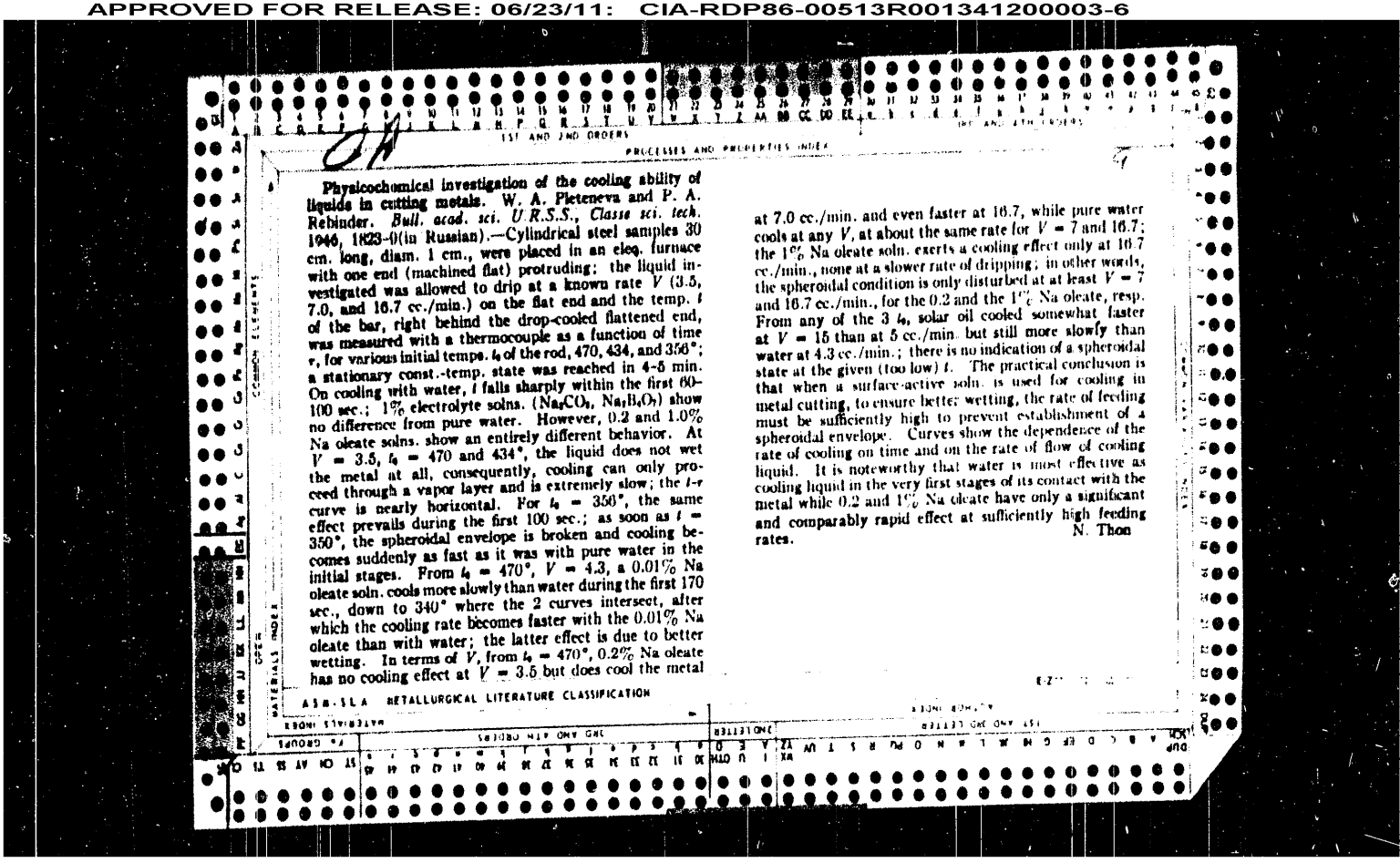
USSR/Cutting Fluids
Metals - Cutting

"Physical-Chemical Investigation of the Cooling Properties of Liquids in the Cutting of Metals," N. A. Pleteneva, P. A. Rehbinder, 7 pp

"Izv Ak Nauk Otd Tekh" No 12

Discusses, with accompanying illustrative graph, the relative values of various liquids for use as cooling agents in the cutting of metals. Among the conclusions is the fact that there is an increased stability of temperature when there is a cover of vapor around the metal.

14T45



Physicochemical investigation of the cooling ability of liquids in cutting metals. W. A. Pleteneva and P. A. Rebinder. *Bull. acad. sci. U.R.S.S., Classe sci. tech.* 1946, 1823-0(in Russian).—Cylindrical steel samples 30 cm. long, diam. 1 cm., were placed in an elec. furnace with one end (machined flat) protruding; the liquid investigated was allowed to drip at a known rate V (3.5, 7.0, and 16.7 cc./min.) on the flat end and the temp. t of the bar, right behind the drop-cooled flattened end, was measured with a thermocouple as a function of time τ, for various initial temps. t_0 of the rod, 470, 434, and 356°; a stationary const.-temp. state was reached in 4–5 min. On cooling with water, t falls sharply within the first 60–100 sec.; 1% electrolyte solns. (Na_2CO_3, $Na_2B_4O_7$) show no difference from pure water. However, 0.2 and 1.0% Na oleate solns. show an entirely different behavior. At V = 3.5, t_0 = 470 and 434°, the liquid does not wet the metal at all, consequently, cooling can only proceed through a vapor layer and is extremely slow; the t–τ curve is nearly horizontal. For t_0 = 350°, the same effect prevails during the first 100 sec.; as soon as t = 350°, the spheroidal envelope is broken and cooling becomes suddenly as fast as it was with pure water in the initial stages. From t_0 = 470°, V = 4.3, a 0.01% Na oleate soln. cools more slowly than water during the first 170 sec., down to 340° where the 2 curves intersect, after which the cooling rate becomes faster with the 0.01% Na oleate than with water; the latter effect is due to better wetting. In terms of V, from t_0 = 470°, 0.2% Na oleate has no cooling effect at V = 3.5 but does cool the metal at 7.0 cc./min. and even faster at 16.7, while pure water cools at any V, at about the same rate for V = 7 and 16.7; the 1% Na oleate soln. exerts a cooling effect only at 16.7 cc./min., none at a slower rate of dripping; in other words, the spheroidal condition is only disturbed at at least V = 7 and 16.7 cc./min., for the 0.2 and the 1% Na oleate, resp. From any of the 3 t_0, solar oil cooled somewhat faster at V = 15 than at 5 cc./min. but still more slowly than water at 4.3 cc./min.; there is no indication of a spheroidal state at the given (too low) t. The practical conclusion is that when a surface-active soln. is used for cooling in metal cutting, to ensure better wetting, the rate of feeding must be sufficiently high to prevent establishment of a spheroidal envelope. Curves show the dependence of the rate of cooling on time and on the rate of flow of cooling liquid. It is noteworthy that water is most effective as cooling liquid in the very first stages of its contact with the metal while 0.2 and 1% Na oleate have only a significant and comparably rapid effect at sufficiently high feeding rates.

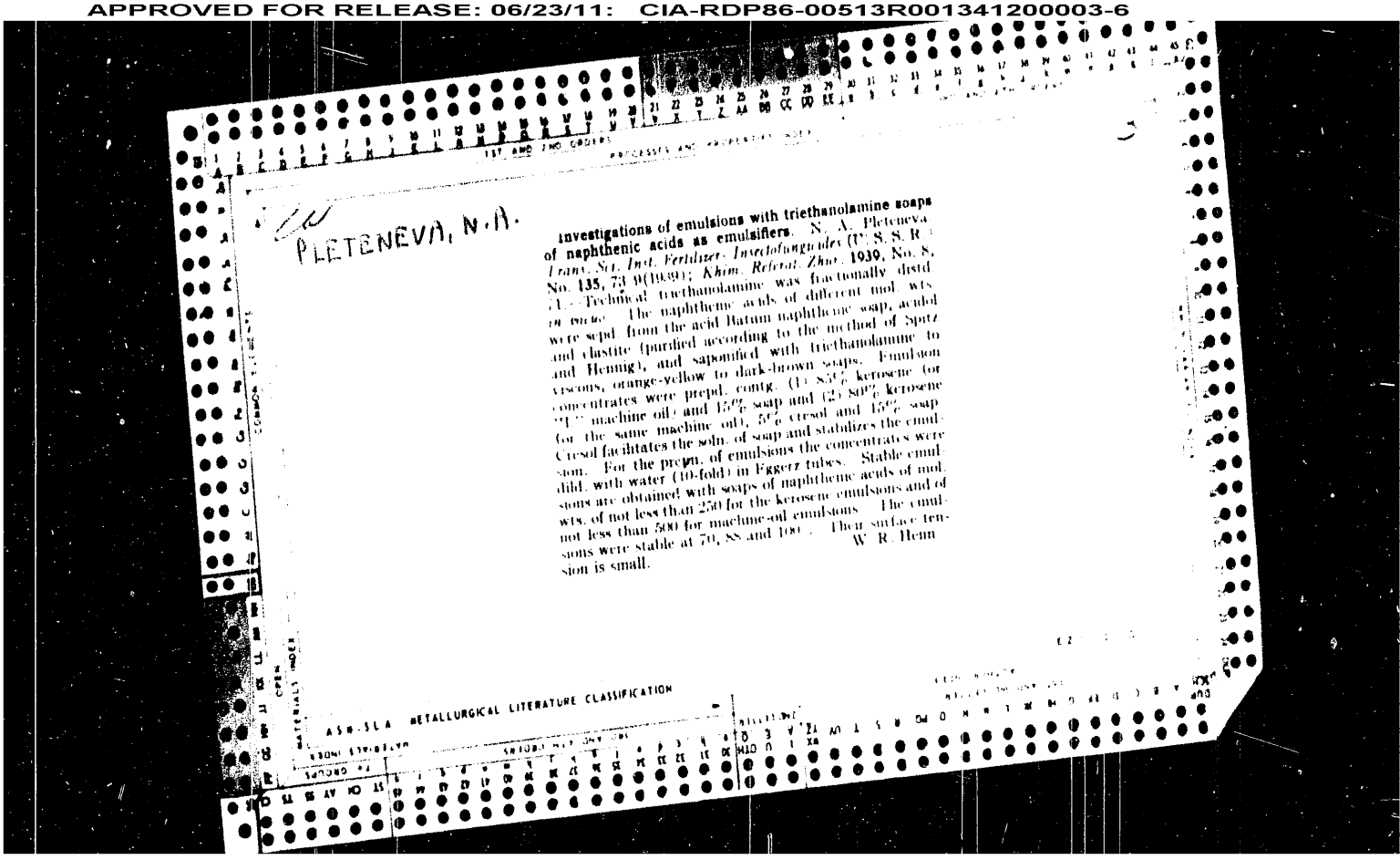
N. Thon

FLETENEVA, N. A., AND REBINDER, A.

Laboratory of Disperse Systems, Colloid-Electro-Chemical Institute, Academy of Sciences, USSR (-1943-)

"Physical-Chemical Analysis of French Chalk as a Cutting-Polishing Material," Izv. Akad. Nauk. SSSR. Otdel. Tekh. Nauk. No. 12, 1944.

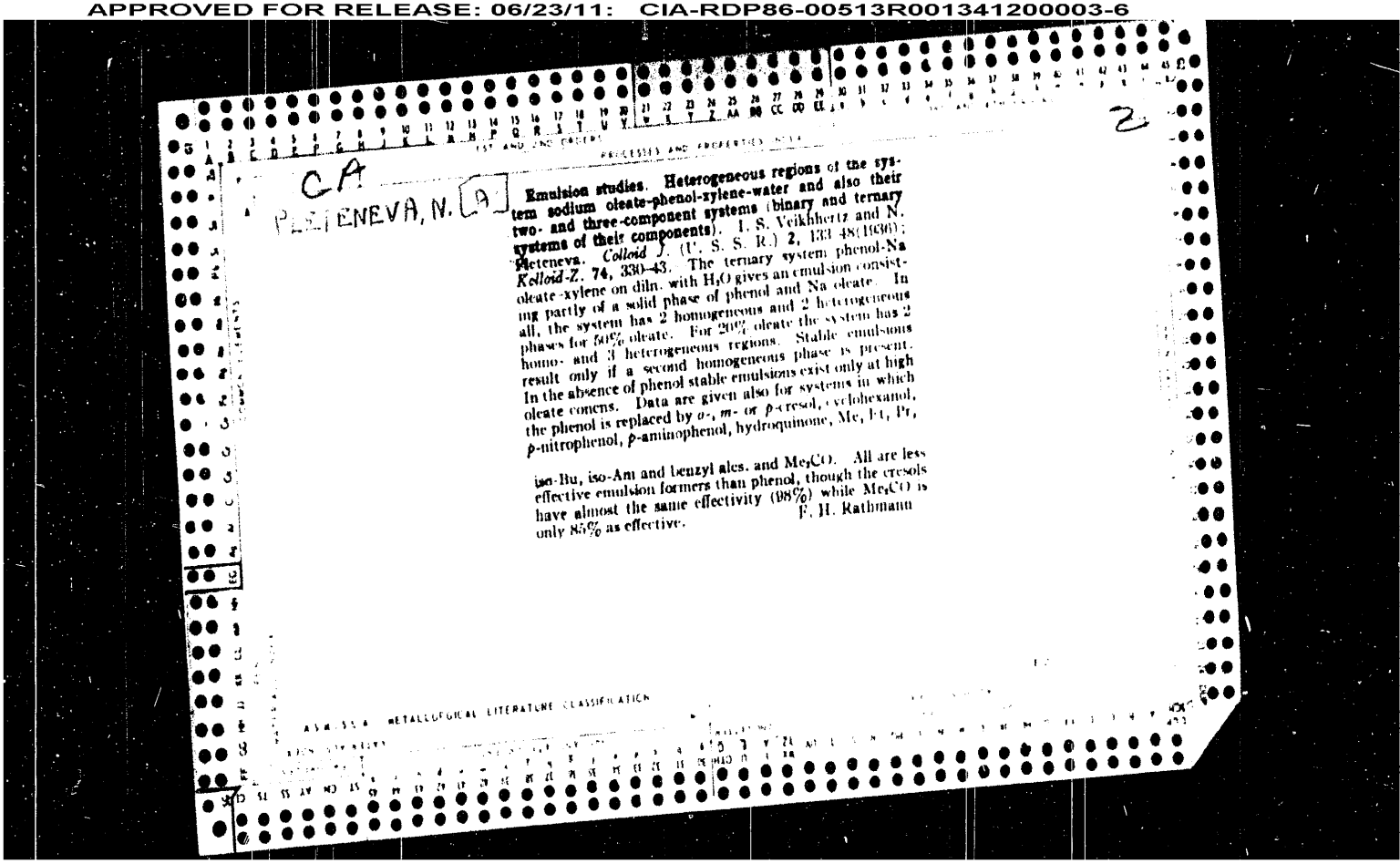
BL-52059019



PLETENEVA, N.A.

Investigations of emulsions with triethanolamine soaps of naphthenic acids as emulsifiers. N. A. Pleteneva (U. S. S. R. *Trans. Sci. Inst. Fertilizer. Insectofungicides* (U. S. S. R.) No. 135, 73-9(1939); *Khim. Referat. Zhur.* 1939, No. 8, 51.—Technical triethanolamine was fractionally distd. *in vacuo*. The naphthenic acids of different mol. wts. were sepd. from the acid Batum naphthenic soap, acidol and elastite (purified according to the method of Spitz and Hennig), and saponified with triethanolamine to viscous, orange-yellow to dark-brown soaps. Emulsion concentrates were prepd. contg. (1) 85% kerosene (or "ip" machine oil) and 15% soap and (2) 80% kerosene (or the same machine oil), 5% cresol and 15% soap. Cresol facilitates the soln. of soap and stabilizes the emulsion. For the prepn. of emulsions the concentrates were dild. with water (10-fold) in Eggerz tubes. Stable emulsions are obtained with soaps of naphthenic acids of mol. wts. of not less than 250 for the kerosene emulsions and of not less than 500 for machine-oil emulsions. The emulsions were stable at 70, 85 and 100°. Their surface tension is small.

W. R. Henn



CA

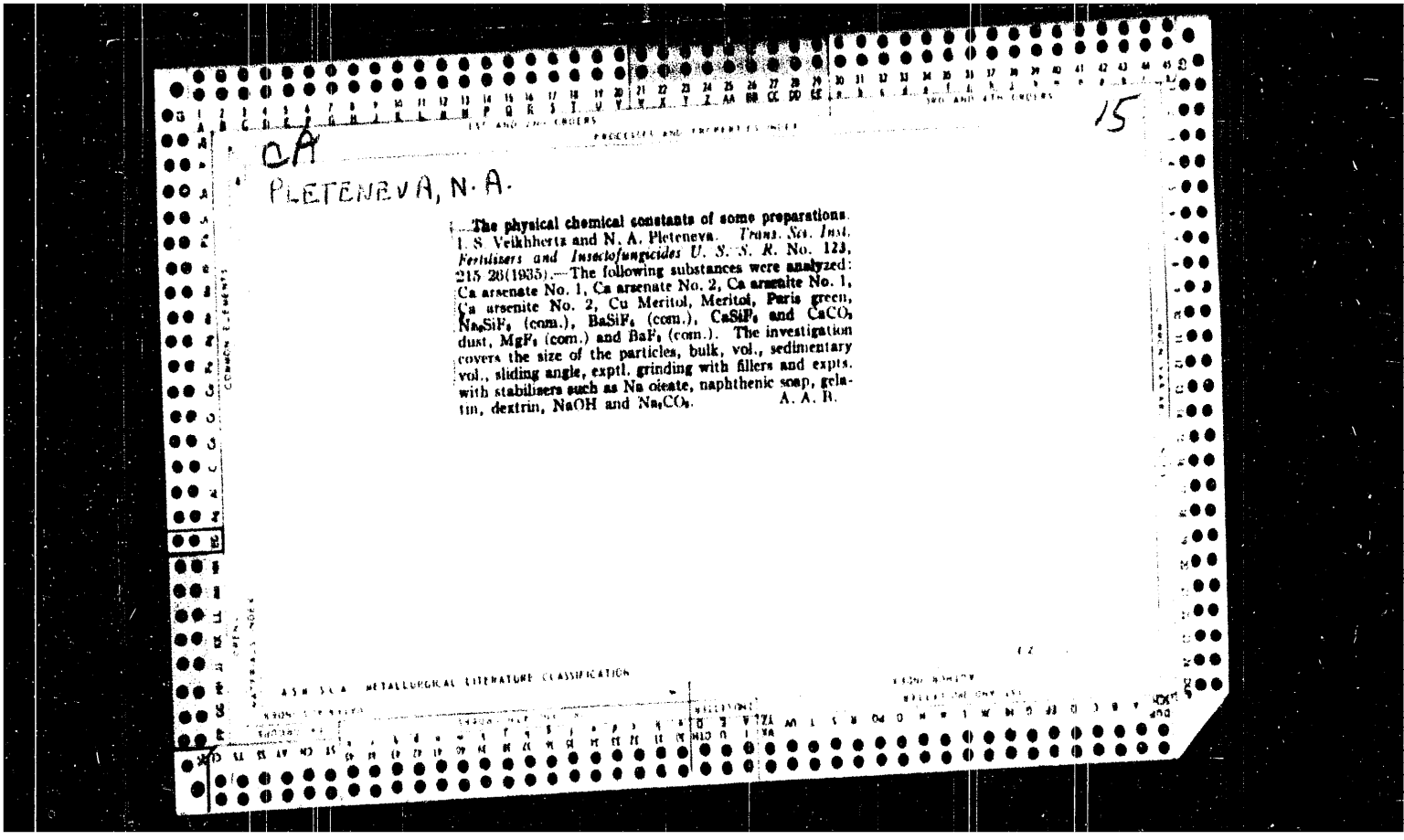
PLETENEVA, N. [9]

2

PROCESSES AND PROPERTIES INDEX

Emulsion studies. Heterogeneous regions of the system sodium oleate-phenol-xylene-water and also their two- and three-component systems (binary and ternary systems of their components). I. S. Veikhhertz and N. Pleteneva. *Colloid J.* (U. S. S. R.) **2**, 133-48(1936); *Kolloid-Z.* **74**, 330-43. The ternary system phenol-Na oleate-xylene on dilu. with H_2O gives an emulsion consisting partly of a solid phase of phenol and Na oleate. In all, the system has 2 homogeneous and 2 heterogeneous phases for 50% oleate. For 20% oleate the system has 2 homo- and 3 heterogeneous regions. Stable emulsions result only if a second homogeneous phase is present. In the absence of phenol stable emulsions exist only at high oleate concns. Data are given also for systems in which the phenol is replaced by *o*-, *m*- or *p*-cresol, cyclohexanol, *p*-nitrophenol, *p*-aminophenol, hydroquinone, Me, Et, Pr, iso-Bu, iso-Am and benzyl alcs. and Me_2CO. All are less effective emulsion formers than phenol, though the cresols have almost the same effectivity (98%) while Me_2CO is only 85% as effective. F. H. Rathmann

METALLURGICAL LITERATURE CLASSIFICATION



15

CA

PLETENEVA, N. A.

—**The physical chemical constants of some preparations.** I. S. Velikhhertz and N. A. Pleteneva. *Trans. Sci. Inst. Fertilisers and Insectofungicides U. S. S. R.* No. 123, 215 26(1935).—The following substances were analyzed: Ca arsenate No. 1, Ca arsenate No. 2, Ca arsenite No. 1, Ca arsenite No. 2, Cu Meritol, Meritol, Paris green, Na_2SiF_6 (com.), $BaSiF_6$ (com.), $CaSiF_6$ and $CaCO_3$ dust, MgF_2 (com.) and BaF_2 (com.). The investigation covers the size of the particles, bulk, vol., sedimentary vol., sliding angle, exptl. grinding with fillers and expts. with stabilisers such as Na oleate, naphthenic soap, gelatin, dextrin, NaOH and Na_2CO_3. A. A. B.

NIKITINA, V.D.; KHOLCHEV, N.V.; ANDREYEVA, Z.M.; SOKHINA, A.M.; CHERNOKHVOSTOVA, Ye.V.; PLETENEVA, I.L.

Properdin system and its role in infection and immunity. Report No.1: The production of active preparations of zymosan. Zhur. mikrobiol.epid.i immun. 31 no.8:12-19 Ag '60. (MIRA 14:6)

1. Iz Moskovskogo instituta epidemiologii, mikrobiologii i gigiyeny.
(POLYSACCHARIDES) (ZYMOSAN) (PROPERDIN)

PLETENEVA, I. L.

"Active Immunization Against Gas Gangrene." Sub 17 May 51, Acad Med Sci USSR.

Dissertations presented for science and engineering degrees in Moscow during 1951.

SO: Sum. No. 480, 9 May 55.

L 20684-65
ACCESSION NR: AT5002132

ENCLOSURE 02

Table 1. Properties of polyamides from α,ω-amino acids with cyclohexane

Amino acid	M.P., C		sp
	monomer	polyamide	
trans-H_2N—⬡—CH_2COOH	330	516	0,43
cis-H_2N—⬡—CH_2COOH	290	385	0,50
trans-H_2N—⬡—CH_2—CH_2—COOH	292	490	0,67
cis-H_2N—⬡—CH_2—CH_2—COOH	253	260	0,78
trans-H_2NH_2C—⬡—CH_2COOH	257—259	423—428	0,15
cis-H_2NH_2C—⬡—CH_2COOH	120	—	—

Card 4/4

L 20684-65
ACCESSION NR: AT5002132

ENCLOSURE 01

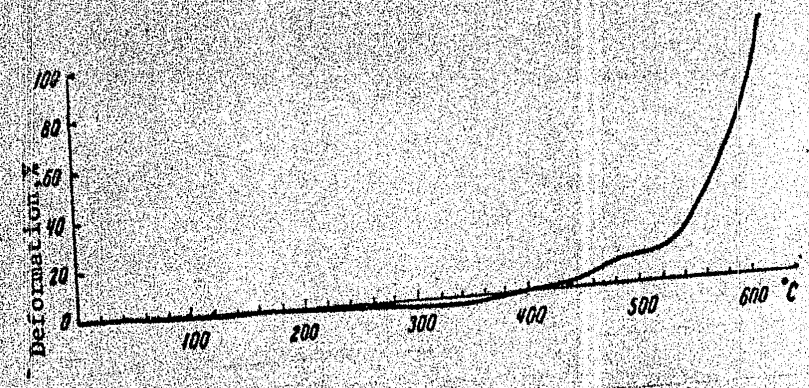


Fig. 1. Thermomechanical curve for the polyamide from trans-4-aminocyclohexylacetic acid

Card 3/4

L 20684-65
ACCESSION NR: AT5002132

nitrogen at 200—320C. The polyamides from the trans monomers were insoluble in the solvents common for polyamides, and were soluble only in concentrated H_2SO_4. The polyamides from the CiS monomers were soluble in the common polyamide-solvents. Fusible high-thermal-stability copolymers were prepared from the new amino acids and ε-caprolactam or ζ-aminoenanthic acid. The copolymers melted at temperatures of up to 450C and were soluble both in H_2SO_4 and in cresol. Orig. art. has: 5 formulas, 2 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 30Jul64 ENCL: 02 SUB CODE: OC, GC

NO REF SOV: 004 OTHER: 007 ATD PRESS: 3165

Card 2/4

L 20684-65 EPF(c)/EPR/EPA(s)-2/EWP(j)/EWT(m)/T Pc-4/Pr-4/Ps-4/Pt-10/Pa-4/Pb-4
RPL/AMD RM/WW/MLK
ACCESSION NR: AT5002132 S/0000/64/000/000/0220/0225

AUTHOR: Muromova, R. S.; Pletneva, I. D.; Afanas'yeva, I. A.; Demidova, T. V.; Pervukhina, I. V.; Shkhiyants, I. V.; Shil'nikova, I. N. 13

TITLE: Synthesis of amino acids of the hexane series and of polyamides based on such acids

SOURCE: AN SSSR. Institut neftekhimicheskogo sinteza. Sintez i svoystva monomerov (The synthesis and properties of monomers). Moscow, Izd-vo Nauka, 1964, 220-225

TOPIC TAGS: amino acid, polyamide, Nylon, thermal stability

ABSTRACT: New amino acids have been prepared and converted to new polyamides with high thermal stability. Table 1 of the Enclosure lists the amino acid monomers and the melting points of the monomers and polymers (all the monomers except the (4-aminocyclohexyl acetic acids are new). Fig. 1 of the Enclosure shows a typical thermomechanical curve. Polycondensation was carried out in sealed ampuls under

Card 1/4

[illegible], I.; ILYUKHINA(?), G., [illegible]

Exhibitions [illegible]
34-36 [illegible] (MIRA [illegible])

1. Glavnyy metodist [illegible] promyshlennost'" na Vy[illegible] yaystva SSSR (for [illegible]). [illegible] na Vystavke dostizheniy [illegible] SSSR ([illegible]). 3. Pavil'on "Obrazovaniye" na Vy[illegible] khozyaystva SSSR (for [illegible]).

PLETENEVA, I. A., TIMOFEYEVA, V. A., and GLIKI, N. V.

"Spiral Growth Layers on Barium Titanate Crystals," by N. V. Gliki, I. A. Pleteneva, and V. A. Timofeyeva, Institute of Crystallography, Academy of Sciences USSR, Kristallografiya, Vol 1, No 5, 1956, pp 607-608

For the first time in the investigation of the growth of crystals of seignettoelectric substances, the occurrence of spiral growth layers was discovered during crystallization in the case of barium titanate. Pictures were taken which show the spirals and the boundaries of domains inside the crystal.

Sum 1258

PLETENEVA, I. A. Jul 47

USSR/Physics
Filters, Ultraviolet
Glass

"Influence of the Iron Content Upon the Conductivity of Ultraviolet Rays by Glass," P. V, Bukarinova, I. A. Pleteneva, Lab for Heat Processing of Glass, State Optical Inst,4pp

"Dok Akad Nauk SSSR, Nova Ser" Vol LVII, No 2

Experiments were conducted on four types of glass utilized in manufacture of ultraviolet filters. Table lists composition of glass. It was determined that to attain similar degrees of light conductivity silicate glass could contain ten times more iron oxide than borate glass. Submitted by Academician I. V, Gnebenshchikov, 17 Dec 1946.

PA 60T103

GLIKI, N.V.; PLETENEVA, I.A.; TIMOFEYEVA, V.A.

Spiral layers of growth on barium titanate crystals.
Kristallografiia 1 no.5:607-608 '56. (MLRA 10:2)

1. Institut kristallografii AN SSSR.
(Barium titanate) (Crystallization)

70-3-2-13/26

Investigation of the Process of Crystallisation of Barium Titanate from a Barium Chloride Melt

Specimens of $BaTiO_3$ were made by fusing $BaCl_2$, $BaCO_3$ and TiO_2 in appropriate proportions in corundum, Pt and Pd crucibles. The crystals of $BaTiO_3$ crystallising out at high temperatures were flat, triangular plates and twinned triangles (twinned into squares). With decreasing temperature and $BaTiO_3$ concentration more isometric crystals in the form of cubes were produced as well as tetragonal prisms and rectangular parallelepipeds. It is concluded that $BaTiO_3$ crystals can be grown under a wide range of temperatures and concentrations. There are 6 figures, 1 table and 8 references, 3 of which are Soviet, and 5 English.

ASSOCIATION: Institut kristallografii AN SSSR
(Institute of Crystallography, Ac.Sc. USSR)

SUBMITTED: May 31, 1957

Card 2/2

70-3-2-13/26

AUTHORS: Timofeyeva, V.A. and Pleteneva, I.A.

TITLE: Investigation of the Process of Crystallisation of Barium Titanate from a Barium Chloride Melt (Issledovaniye protsessa kristallizatsii titanata bariya iz rasplava khloristogo bariya)

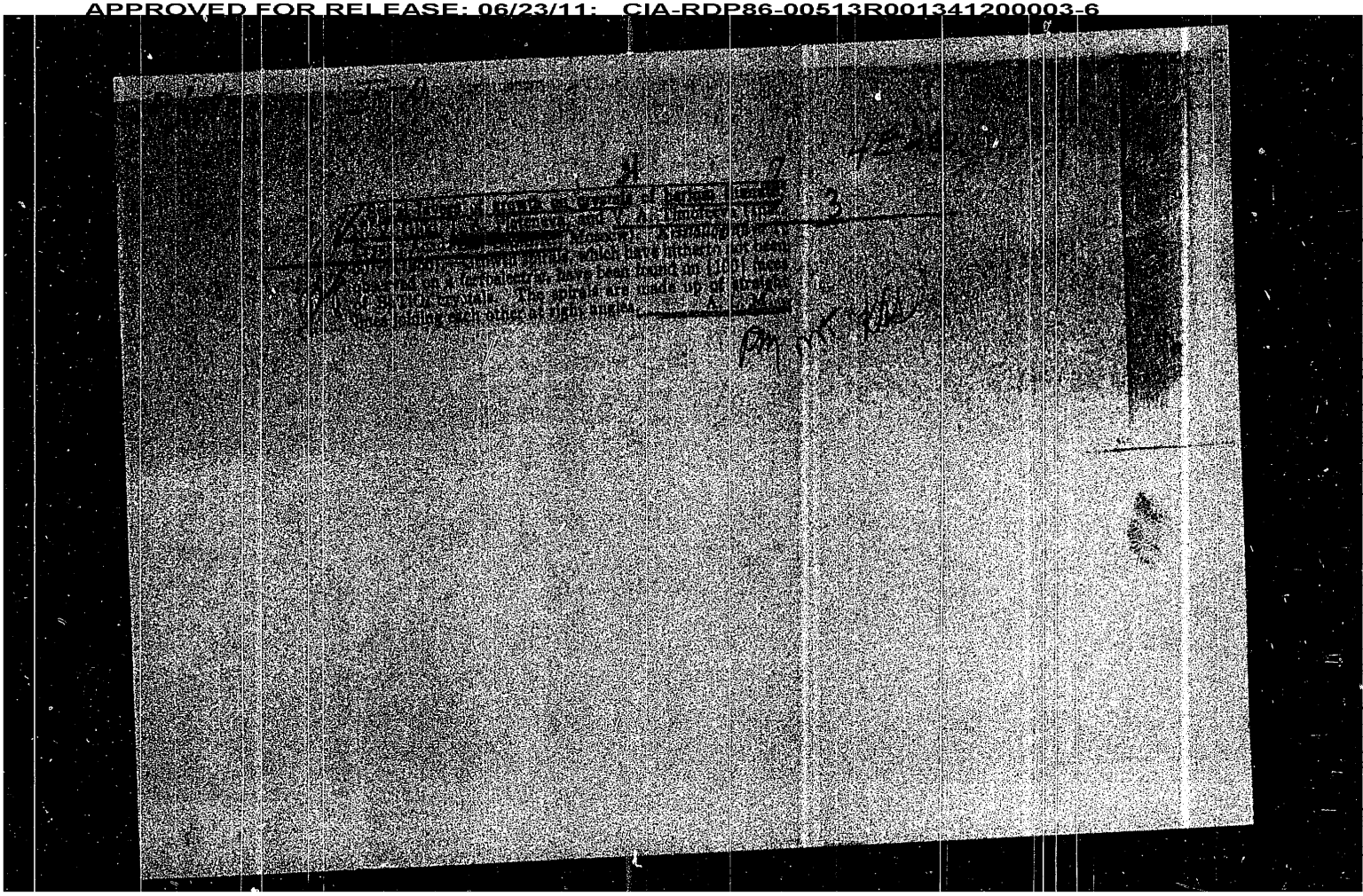
PERIODICAL: Kristallografiya, 1958, Vol 3, Nr 2, pp 214 - 218 (USSR).

ABSTRACT: The process of the crystallisation of barium titanate from a barium chloride melt in the temperature interval 1 200 to 1 470 °C was followed by differential thermal analysis. From the data obtained, the phase diagram of the system $BaCl_2$-$BaTiO_3$ was constructed and by choosing the right conditions triangular or square crystals of $BaTiO_3$ could be grown up to 1 cm^2 in area.
The m.p. of $BaCl_2$ is 962 °C and that of $BaTiO_3$ 1 610 °C. There is a eutectic at 900 °C at a composition of about 4% $BaTiO_3$. The solidus at about 1 220 °C runs from 25 - 100 mol% $BaTiO_3$ and the liquidus rises from 1 220 °C 25% $BaTiO_3$ to 1 610 °C at 100% $BaTiO_3$.

Card 1/2

IVANOV, V.I.; PLETENETSKIY, G.Ye.; NECHIPORENKO, Ye.P.

Effect of highly refractory oxides on the thermoelectromotive force of tungsten, molybdenum, and tantalum, in vacuum at 1,500° C. Ogneupory 28 no.7:327-331 '63. (MIRA 16:9)



PLETNEV, V.D.; SKURIDIN, G.A.; SHALIMOV, V.P.; SHVACHUNOV, I.N.

Dynamics of the geomagnetic trap and the origin of the earth's radiation belts. Kosm.issl. 3 no.2:338-340 Mr-Ap '65.
(MIRA 18:4)

11f

CA PLETENEVA, I.A.

Daily rhythm in the carbohydrate function of the liver. V. V. Koval'skil and I. A. Pleteneva. *Doklady Akad. Nauk S.S.S.R.* **57**, 165–8 (1947).—During the daytime periods normal women yield blood sugar values that are always above those shown during the night; the night curve drops to normal level some 2 hours after sugar loading, while the day curve remains above the night curve by some 25 mg. % at that time. Both drop below normal after 3 hrs.

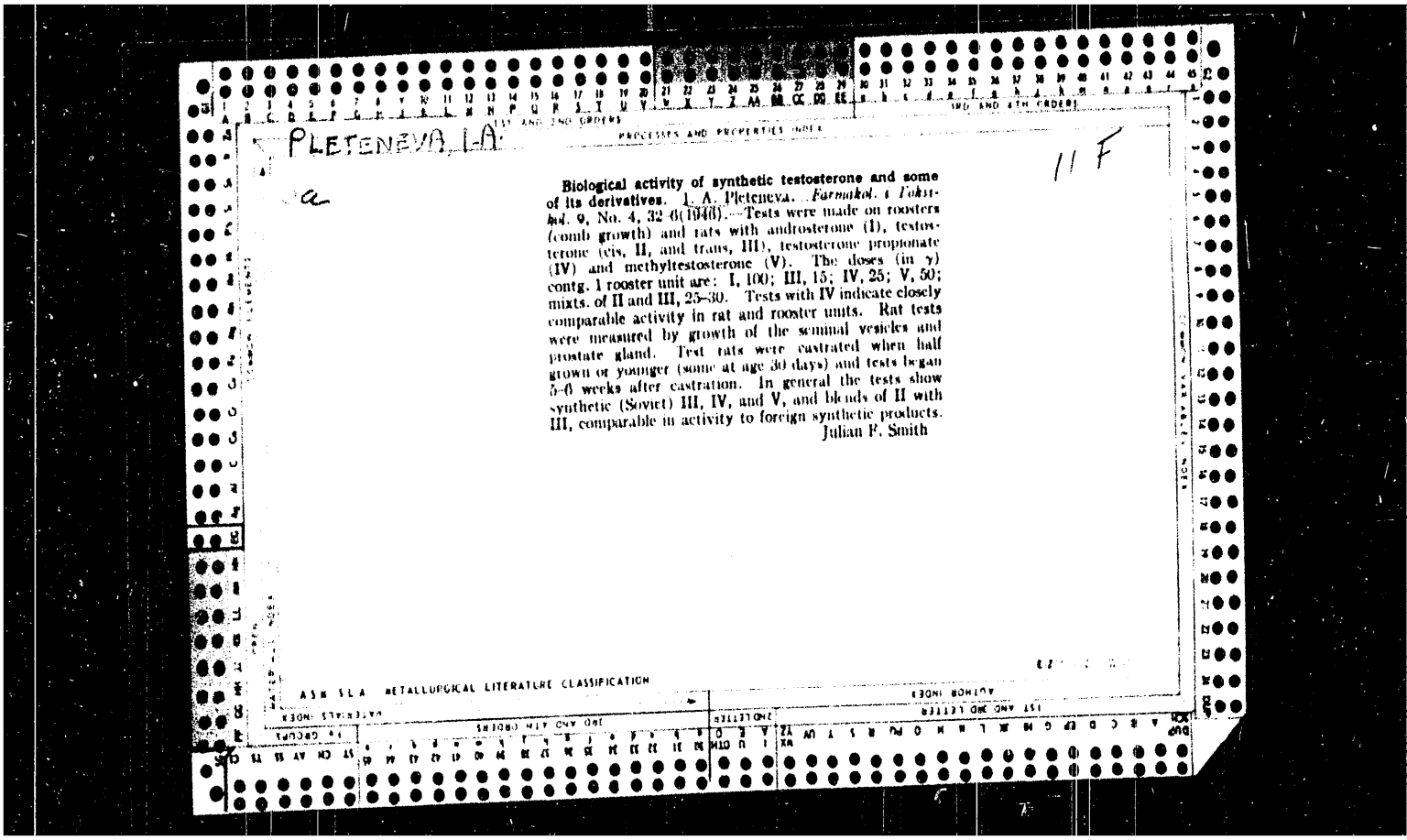
In pregnant women, 3 types of curves are found which correspond to those with the daytime predominance of sympathicotonic neural and humoral adjustment, those with daytime predominance of parasympathicotonic neural and humoral adjustment, and those in which both day and night periods are governed by elements of sympathico- and parasympathicotonic regulation. G. M. K...

CA PLETENEVA, I.A.

11F

The daily rhythm of blood sugar. V. V. Koval'skii and I. A. Pleteneva. *Doklady Akad. Nauk S.S.S.R.* 56, 835-8 (1947). In pregnant women several types of cycles are observed. The majority show max. levels at about 9 A.M. and 3 P.M., a smaller no. show max. at noon and 7 P.M. and a few show max. at about 9 A.M. and 7 P.M.

G. M. Kosolapoff

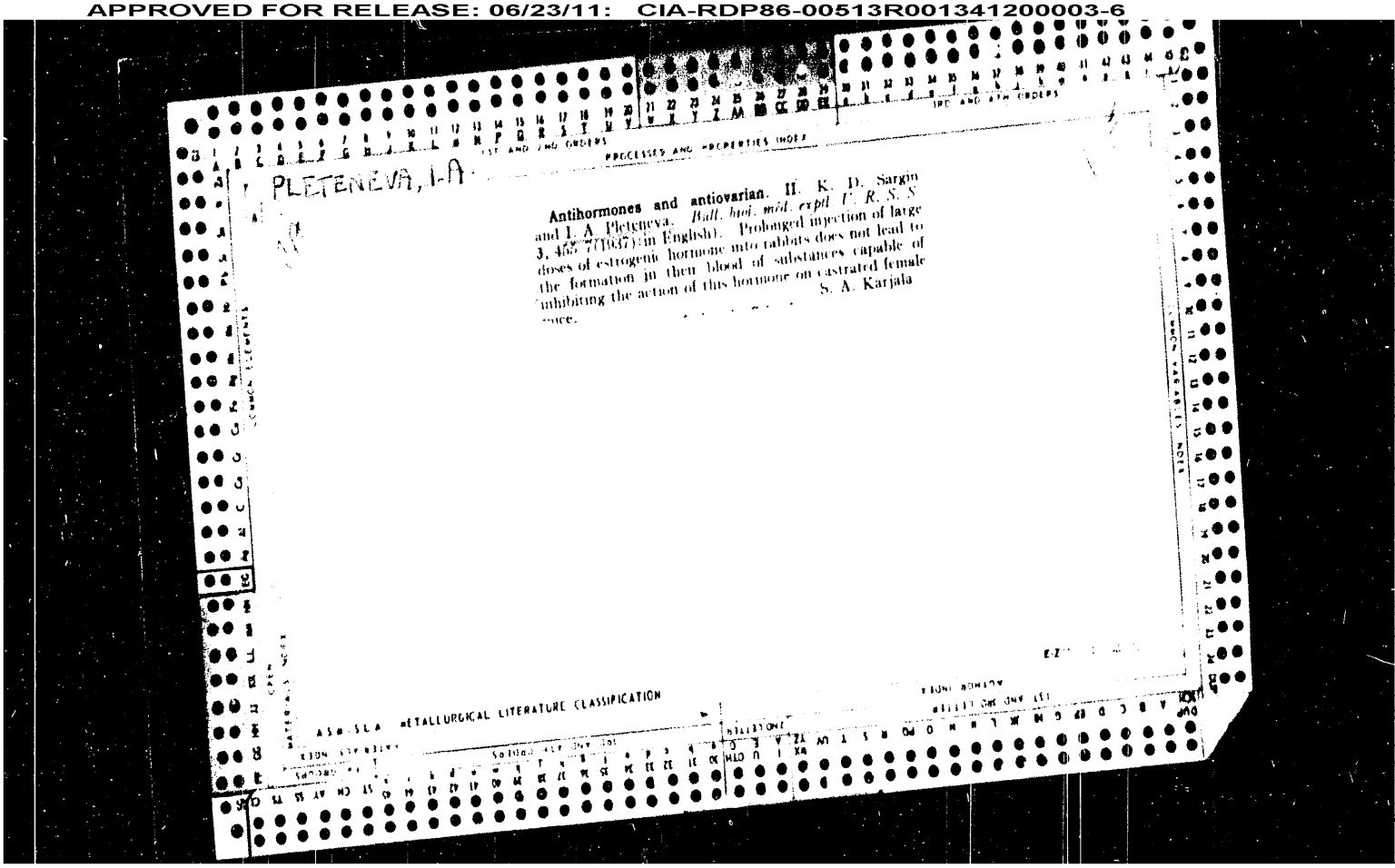


PLETENEVA, I.A.

11 F

Biological activity of synthetic testosterone and some of its derivatives. I. A. Pleteneva. *Farmakol. i Toksikol.* 9, No. 4, 32-6(1946).—Tests were made on roosters (comb growth) and rats with androsterone (I), testosterone (cis, II, and trans, III), testosterone propionate (IV) and methyltestosterone (V). The doses (in γ) contg. 1 rooster unit are: I, 100; III, 15; IV, 25; V, 50; mixts. of II and III, 25–30. Tests with IV indicate closely comparable activity in rat and rooster units. Rat tests were measured by growth of the seminal vesicles and prostate gland. Test rats were castrated when half grown or younger (some at age 30 days) and tests began 5–6 weeks after castration. In general the tests show synthetic (Soviet) III, IV, and V, and blends of II with III, comparable in activity to foreign synthetic products.

Julian P. Smith



PLETENEVA, I.A.

Antihormones and antiovarian. II. K. D. Sargin and I. A. Pleteneva. *Bull. biol. méd. expl. U. R. S. S.* 3, 465–7 (1937) (in English). Prolonged injection of large doses of estrogenic hormone into rabbits does not lead to the formation in their blood of substances capable of inhibiting the action of this hormone on castrated female mice.

S. A. Karjala

1505. PLETNEVA G.G. City Sci. Res. Inst. of Tb, Moscow. *Course and forms of tuberculosis in children re-vaccinated at an early age (Russian text) PROBL. TUBERK. 1956, 34/4 (13-23)

Study of histories of 51 children revaccinated at an early age, who were investigated and treated in tb-sanatoria in 1952-1953 and the first half of 1954. These children had been vaccinated in the first days after birth and revaccinated at an early age. The control group comprised 32 children vaccinated but not revaccinated due to various reasons. The 2 groups were identical with regard to age and form of the disease. The forms of the disease observed were: primary complex, broncho-adenitis and tb-meningitis. The incidence of severe and complicated forms was much lower in the revaccinated group than in the control group. Local changes were mild in the revaccinated children and moderate to severe in the control group. Toxic symptoms were less marked in the revaccinated group, 19 of whom improved considerably, as revealed by rapid resorption and regression of local changes in the lungs and bronchial lymph nodes. These patients were observed radiographically and clinically during 0.5 - 3 months of stationary hospitalization treatment without any antibiotic treatment. In general the duration of treatment until the resorption stage was attained was shorter in the revaccinated group. The onset of tb could be detected at various times after revaccination. Some of the children became ill 2 months after revaccination, a fact which speaks for the necessity of revaccination in the pre-allergic period of infection. No unfavourable effect of BCG was observed in these cases. The insufficient effect of revaccination may have been due to contact with a carrier of tubercle bacilli, to unfavourable living or other conditions, or, especially, to infectious disease occurring shortly before or after revaccination. As a rule, however, revaccination induces a more favourable course of tb in children.

Soloveva - Moscow (XV, 7)

USSR/Microbiology - Microorganisms Pathogenic to Humans and Animals F-3

Abs Jour: Ref Zhur - Biol., No 18, 1958, 81571

Author : Verkos, K.P., Pletneva, G.G., Blankman, A.L., Vishnevskaya, N.V., Korneyeva, G.A., Linskaya, A.I., Lur'e, A. Ya., Isakovich, S.P.

Inst : -

Title : Vaccination Against Tuberculosis of Children and Adolescents Having a Positive Reaction to Intra-Dermal Injection of Tuberculin.

Orig Pub: Vopr. okhrany materinstva i detstva, 1957, 2, No. 6, 40-43

Abstract: No abstract.

Card 1/1

PLETNEV, V.S.

Don't separate students agricultural work from their knowledge of biology. Biol. v shkole no.4:46-50 Jl-Ag '61. (MIRA 14:7)

1. Kurskiy institut usovershenstvovaniya uchiteley.
(Kursk Province--Biology--Study and teaching)

BOTOV, A.A.; PLETNEV, V.P.

Attachment to IZA - 1 measuring instrument. Izm.tekh.no.6:32 N-D '56. (MLRA 10:1)

(Measuring instruments--Attachments)

SHAROV, M.V.; MOROZOV, B.S.; PLETENEV, V.M.

Gaseous porosity of magnesium alloy castings. Lit.rpoizv. no.6:16-19 Je '53. (MLRA 6:7)
(Magnesium founding)

PLETENEV, V. M.

(3)

Gaseous porosity of magnesium-alloy castings. M. V. Sharov, B. S. Morozov, and V. M. Pletenev. *Liteinoe Proizvodstvo* 1953, No. 6, 16–19.—Cavities found in Mg-alloy castings and usually attributed to shrinkage phenomena are probably caused by H evolving on solidification. In a series of expts., 0.05–0.30% H was introduced in the molten bath of Mg alloys through adding carnotite flux contg. 10% H, samples were analyzed for the gas after solidification, and the castings were studied by the x-ray technique. Higher H concn. lead to increased porosity. The degree of porosity was divided into 11 groups and then compared with porosity found in plant products. Identicity of porosity was established. The effect of H on tensile strength and elongation begins to be felt with H_2 concn. of 18 cc./100 g. and is directly proportional to the extent of porosity.

J. D. Gat

PLETENEV, V M

4

Gas porosity in magnesium alloy castings. M. V. Sharov, B. S. Morozov, and V. M. Pleteney (*Liteinoe Proizvodstvo*, 1955, No. 6, 16—19).—Investigations of porosity in Mg–Al and Mg–Zn alloys showed that the so-called "contraction porosity" is in many cases identical with the porosity caused by evolution of gas bubbles in the castings during cooling. A relation between the H_2 content of the alloy and the moisture content of the flux on the one hand, and between the H_2 content and the degree of porosity on the other, was found. The porosity appeared under industrial conditions in samples containing more than 14·5 c.c. of H_2/100 g. alloy, but was displaced towards higher H_2 content in specimens cooled rapidly. On the basis of *X*-ray and microscopical examination of a large no. of specimens, it was possible to establish a scale of porosity ranging from 0 to 10 degrees. In addition to the control of the moisture content of materials coming into contact with the molten alloy, the porosity can be reduced or eliminated by efficient cooling of the moulds. A finer grain structure and better mechanical properties of the alloy are obtained by this method.

METALL. AUSTR. (R.B.C.) (2)

S/049/60/000/011/012/013
D247/D305

On the possibility ...

results of calculation, if one assumes that the density of charged particles decreases when [illegible] 0.1 . There are 2 tables and 12 references: 7 Soviet-bloc and 5 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: S. F. Singer, Trapped albedo theory of the radiation belt, Phys. Rev. Letters, 1, 1958; S. F. Singer, On the cause of the minimum in the earth radiation belt, Phys. Rev. Letters, 3, 1959; A. J. Dessler, The propagation velocity of world-wide sudden commencements of magnetic storms, J. Geophys. Res. 63, no. 2, 1958; A. J. Dessler, Large amplitude hydromagnetic waves above the ionosphere, J. Geophys. Res., no. 3, 1958.

ASSOCIATION: Akademiya nauk SSSR, Institut fiziki atmosfery (Academy of Sciences, USSR, Institute of Physics)

SUBMITTED: January 12, 1960

Card 3/3

On the possibility...

It can be assumed that considerable changes of μ occur when $\rho/r \approx 0.1$, ρ being the Larmor radius of the charged particle, r the radius of curvature of the magnetic line of force. This has been used to explain the minimum of density of charged particles at an altitude $3a$, (a = radius of the earth). A similar explanation is not possible for the decrease in radiation intensity at altitudes above $5a$. The condition for the conservation of the magnetic moment in a wave field

$$\frac{h_0}{H_0} \approx \frac{2\pi}{\lambda} \quad (4)$$

is considered, λ being Alfven's wave length, H_0 the constant field, h_0 the variable field amplitude. Values of [illegible] for protons and electrons at different altitudes are given in two tables. Elementary calculations show that Eq. (4) restricts the minimum zone much more sharply than Eq. (2). Experimental data are in good agreement with the

Card 2/3

S/049/60/000/011/012/012
D247/D305

9.9120 (1046)
3.9110 (1121,1482)

AUTHOR: Pletnev, V. D.

TITLE: On the possibility of escape of charged particles from the external geomagnetic field

PERIODICAL: Akademiya nauk, Izvestiya. Seriya geofizicheskaya, no. 11, 1960, 1671-1673

TEXT: The movement of charged particles in the geomagnetic field and their accumulation depends on the degree of constancy of their magnetic

$$\mu = \frac{mv^2}{2H}$$

. A considerable change of μ causes the particle to escape towards more dense strata of the atmosphere or into the external space. For the dipole field of the earth, the condition is

(2)

$$\frac{\rho}{r} \ll 1$$

Card 1/3

PLETNEV, Semen Prokop'yevich; MELESHKO, K.L., red.; KUZEMBAYEVA, A.I., tekhn. red.

[Potentials for economizing on materials in construction] Rezervy ekonomii material'nykh resursov v stroitel'stve; iz opyta raboty stroek Kazakhstana. Alma-Ata, Kazakhskoe gos.izd-vo, 1960. 169 p. (MIRA 14:6)

(Kazakhstan--Construction industry--Costs)

PYATAKOV, A.; PLETENEV, P.; Chos, S.; SEDOV, B.; SAAKOV, M.; ORLOVSKIY, Yu.; KARASINA, N.; MAMIOFA, I., inzh.

Discussing the draft of the "Basic Principles of the Labor Law of the U.S.S.R. and the Union Republics". Sots.trud 4 no.11:12-32 N '59. (MIRA 13:4)

1. Direktor Krasnopresnenskogo sakharorafinadnogo zavoda (for Chos). 2. Predsedatel' zavkoma profsoyuza Krasnopresnenskogo sakharorafinadnogo zavoda (for Sedov). 3. Zamestitel' zaveduyushchego otdelom truda i zarabotnoy platy TSentral'nogo komiteta profsoyuza rabochikh neftyanoy i khimicheskoy promyshlennosti (for Saakov). 4. Institut prava AN SSSR (for Orlovskiy). 5. Institut okhrany truda Vsesoyuznogo tsentral'nogo soveta profsoyuzov (for Karasina). 6. Leningradskiy oblastnoy sovet Vsesoyuznogo obshchestva izobretateley i ratsionalizatorov (for Mamiofa).

(Labor laws and legislation)

L 14954-63
ACCESSION NR: AP3004264

are identical in magnitude and sign, so that the readings of a W-Mo thermocouple would remain constant. Structural changes coincident with the changes in thermal emf were revealed by photomicrographic analysis. Presumably, the dark parallel bands observed on the tantalum grains are caused by oxidation. Tantalum becomes brittle and is therefore not recommended for thermocouples. Orig. art. has: 6 figures and 1 table.

ASSOCIATION: none

SUBMITTED: 00 DATE ACQ: 20Aug63 ENCL: 01

SUB CODE: PH, MA NO REF SOV: 001 OTHER: 007

Card 3/43

the vacuum furnace was controlled with reference thermocouples: a VR-5/20 thermocouple and a platinum-platinum-rhodium thermocouple. Thermocouples were made by joining the heat-treated wire with the untreated, as a reference metal. Thermal emf generated between the hot and cold junctions of such thermocouples was measured in the vacuum apparatus. The cold junctions of the reference thermocouple and of the thermocouples under study were maintained in wet ice. It was shown that experimental thermal emf of the W, Mo, and Ta wires annealed and subsequently heated for 45 hr in the oxides was not significantly different from that of the unannealed wires, except in the case of W preheated in ZrO_2. Diameter of the wires in the 0.2 to 1.0 mm range has no effect upon thermal emf stability. For each metal the changes in thermal emf due to preheating in oxides were plotted against preheating time at 1500C with each of the oxides or against temperature (in the 0—1500C range) at 45 hr of preheating. The data indicated that the thermal emf of tungsten remains stable after contact with Al_2O_3, MgO, or BeO, but increases considerably with ZrO_2; molybdenum thermal emf is stable after contact with Al_2O_3, MgO, or ZrO_2 and changes slightly after 5-hr contact with BeO; and tantalum thermal emf changes significantly after preheating in all the oxides. It was noted that small changes in the thermal emf of W and Mo after contact with MgO

L 14954-63 EPF(n)-2/EWP(q)/EWT(m)/BDS/T-2 AFFTC/ASD/SSD Pu-4
WH/JD/HM/JG
ACCESSION NR: AP3004264 S/0131/63/000/007/0327/0331

AUTHOR: Ivanov, V. I.; Pletenetskiy, G. Ye.; Nechiporenko, Ye. P.

TITLE: Effect of high-temperature oxide refractories on the thermal emf of tungsten, molybdenum, and tantalum in vacuum at 1500C

SOURCE: Ogneupory*, no. 7, 1963, 327-331

TOPIC TAGS: thermocouple, high temperature, high-temperature thermocouple, insulating ceramic material, ceramic insulator, magnesia, alumina, beryllia, zirconia, tungsten, molybdenum, tantalum, tungsten wire, molybdenum wire, tantalum wire, high-temperature oxide refractory, thermal emf, vacuum apparatus, tungsten-molybdenum thermocouple, annealing, annealed wire, vacuum furnace

ABSTRACT: The stability of operation of high-temperature thermocouples made from annealed or unannealed W, Mo, or Ta wires after prolonged contact at 1500C with an insulating ceramic material — MgO, BeO, Al_2O_3, and ZrO_2 — has been studied in the vacuum apparatus shown in Fig. 1 of Enclosure. W, Mo, and Ta unannealed standard wires were heat-treated in contact with the pure powdered oxides for 15, 30, and 45 hr at 1500C in a vacuum (2×10^{-5} mm Hg). Wires of the same metals but annealed in vacuum at 2000—2200C, were similarly treated. Temperature in

Card 1/3

L 16901-65
ACCESSION NR: AP4046472

ENCLOSURE: 01

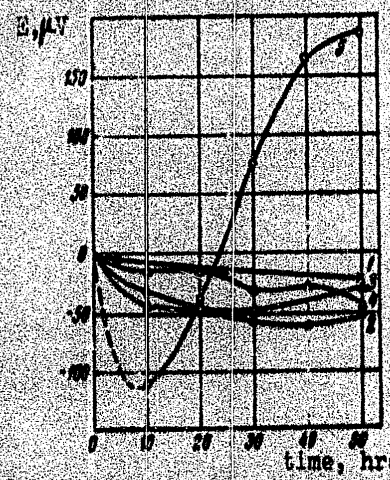


Fig. 1. Change in thermal emf during heating in helium at 1500C. 1 - iridium; 2 - tungsten; 3 - VR-5 tungsten alloy; 4 - VR-20 tungsten alloy; 5 - molybdenum.

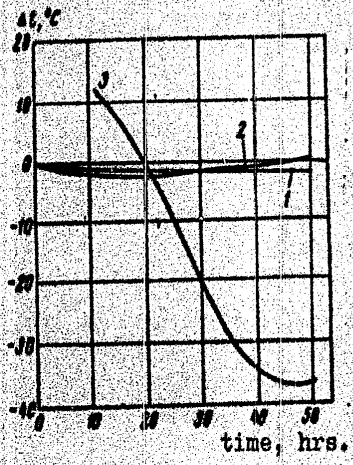


Fig. 2. Change in primary thermal emf of thermocouples in helium. 1 - tungsten-iridium; 2 - VR-5/VR-20; 3 - tungsten-molybdenum.

Card 3/3

L 16901-65
ACCESSION NR: AP4046472

thermocouple is very unstable. Orig. art. has: 2 figures.

ASSOCIATION: Fiziko-tekhnicheskiy institut, Akademii nauk UkrSSR (Physico-Technical Institute, Academy of Sciences UkrSSR)

SUBMITTED: 00 ENCL: 01

SUB CODE: EM NO REF SOV: 001 OTHER: 001

Card 2/3

L 16901-65 EWT(m)/EPF(c)/EPF(n)-2/EWA(d)/EPA(w)-2/T/EWP(t)/EWP(b) Pab-10/
Pr-4/Pu-4 IJP(c)/AEDC(b)/SSD/AFWL/ASD(f)-2 RWH/MJW/JD/JG
ACCESSION NR: AP4046472 S/0032/64/030/010/1243/1244

AUTHORS: Pletenetskiy, G. Ye.; Mandrich, A. T.

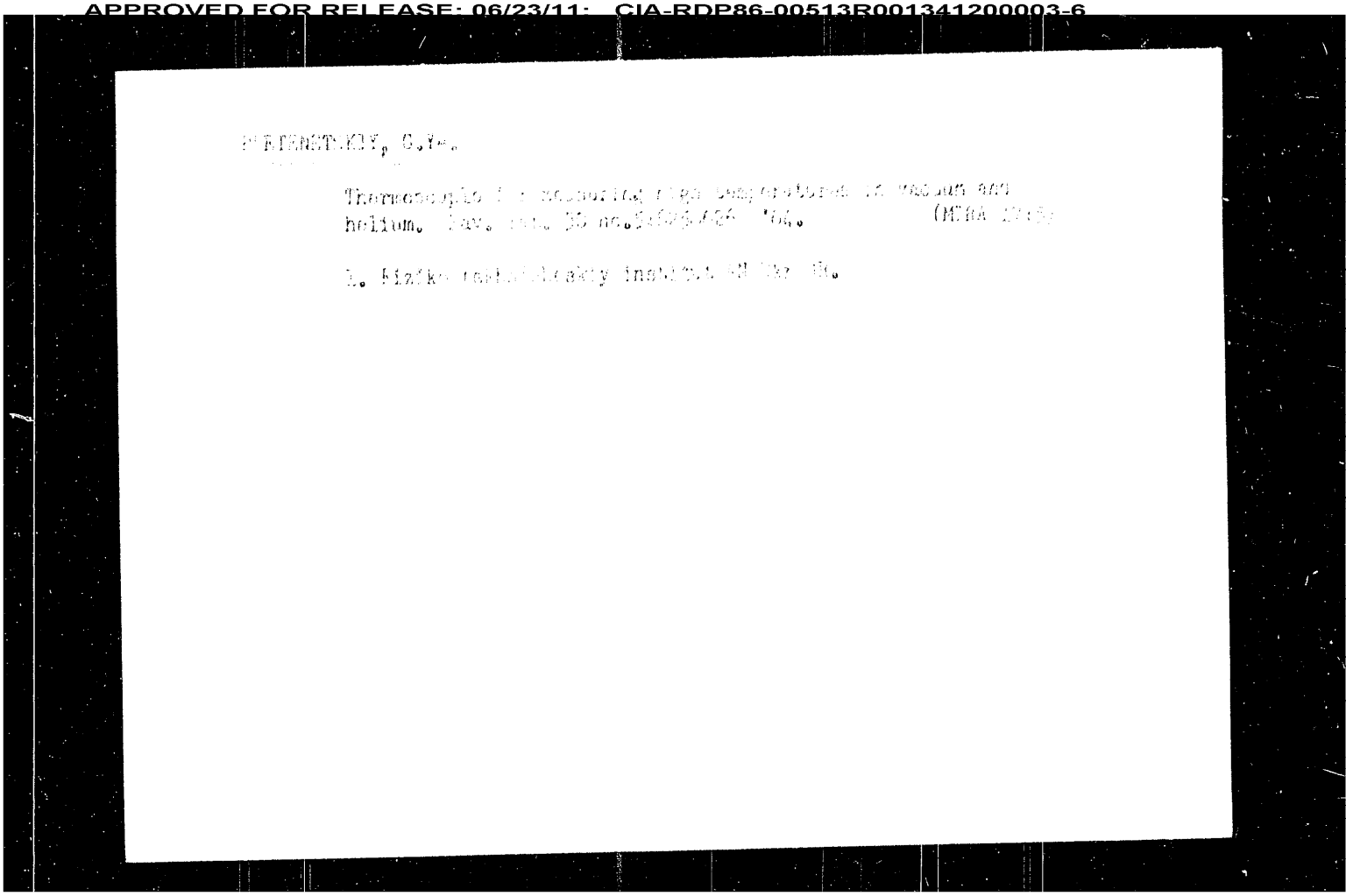
TITLE: Investigation of thermoelectrode materials in helium at 1500C

SOURCE: Zavodskaya laboratoriya, v. 30, no. 10, 1964, 1243-1244

TOPIC TAGS: thermal emf, thermocouple, helium, tungsten/ VR 5 tungsten alloy, VR 20 tungsten alloy

ABSTRACT: The authors studied the stability of the thermal emf of thermoelectric materials (iridium, molybdenum, tungsten, and tungsten alloy) in helium at 1500C. The tested material was heat-treated before the experiment to insure proper grain size. The annealed thermoelectrodes were then tested for homogeneity. After this, they were placed in a furnace in a helium-filled chamber. The time dependence of the thermal emf for the tested materials is shown in Fig. 1 on the Enclosure. It was found that preliminary heating in hydrogen, argon, or vacuum had little effect on the stability of Mo during further heating in helium. Preliminary heating of tungsten in a vacuum had little effect on the thermal emf on further heating in helium, but preliminary heating in argon had a deleterious effect. Stabilities of thermocouples in helium are shown in Fig. 2 on the Enclosure. It is seen that the tungsten-iridium thermocouple is most stable, and the tungsten-molybdenum

Card 1/3



PLETENETS, Yu.K. [Pletenets', IU.K.], slesar'

Attachment to the drilling machine. Mekh. sil'. hosp. 11 no.5:15 My '60. (MIRA 14:3)

1. Mikhaylovskaya remontno-tekhnicheskaya stantsiya, Zaporozhskoy oblasti.
(Drilling and boring machinery--Attachments)

L 36946-66

ACC NR: AP6019591

$$\ddot{x} = \omega_z\dot{y} - \omega_y\dot{z},$$
$$\ddot{y} = -\omega_z\dot{x} + \omega_x\dot{z},$$
$$\ddot{z} = \omega_y\dot{x} - \omega_x\dot{y},$$

$$\omega_x = \frac{eH_x}{mc}, \quad \omega_y = \frac{eH_y}{mc}, \quad \omega_z = \frac{eH_z}{mc},$$

are solved asymptotically by assuming

$$\omega_x = \varepsilon^{n+1}\omega_1, \quad \omega_y = \varepsilon^{n+1}\omega_2, \quad \omega_z = \varepsilon^n\omega_3,$$
$$\omega_1 \sim \omega_2 \sim \omega_3 \sim 1, \varepsilon \ll 1.$$

For each magnetic field the reflection boundaries are calculated, the conditions of hose instability determined, and two mechanisms are proposed for particle penetration into the magnetosphere. The authors express gratitude to V. P. Shalimov and L. S. Chesalin for evaluating this work. Orig. art. has: 3 figures and 64 formulas. [04]

SUB CODE: 03,20/ SUBM DATE: 31Jan66/ ORIG REF: 012/ OTH REF: 006/ ATD PRESS: 5036

Card 2/2

L 36946-66 EWT(1)/FCC GW
ACC NR: AP6019591 SOURCE CODE: UR/0293/66/004/003/0378/0393

AUTHORS: Yershkovich, A. I.; Pletnev, V. A.; Shuridin, G. A.

ORG: none

TITLE: Motion of charged particles in the vicinity of the neutral point

SOURCE: Kosmicheskiye issledovaniy , v. 4, no. 3, 1966, 378-393

TOPIC TAGS: magnetic field, solar wind, magnetosphere, particle trajectory, asymptotic property, CHARGED PARTICLE, EARTH MAGNETIC FIELD

ABSTRACT: The motion of charged particles in the vicinity of neutral points is discussed, using two- and three-dimensional models. The neutral point is shown to be a regular singularity in the magnetic field and exists on the boundaries of the magnetosphere where the solar wind interacts with the geomagnetic field. Two types of fields are considered:

$$H_x = -2Ax, \quad H_y = -2Ay, \quad H_z = 4Az ,$$

and

$$H_x = -2Ax; \quad H_y = 0, \quad H_z = 2Az.$$

The orbits of charged particles are calculated first in the two-dimensional field where exact solutions are obtained for several special cases. The three-dimensional case is analyzed by using the Volosov recurrence method. The equations

UDC: 538.691

Card 1/2

LYUBIMOV, N.N., prof., doktor ekon. nauk; PLETNEV, E.P., doktor ekon. nauk; SERGEYEV, S.D., dots., kand. ekon. nauk; MEL'CHIKOV, S.M., doktor ekon. nauk; BYZYKIN, V.I., kand.ekon.nauk; SYCHOV, I.I., dots., kand.ekon.nauk; IVONIKOV, I.S., kand.ekon.nauk; KUZ'MIN, I.A., dots., kand.ekon.nauk; NESTEROV, M.V.; POPOV, A.N., dots., kand.ekon.nauk; SOLOV'YEV, A.A., kand.ekon.nauk; STEPANOV, G.P., dots., kand.ekon.nauk; SHCHETININ, V.D., dots. kand. ekon. nauk; MOGILEVCHIK, A.Ye., red.; SHLENSKAYA, V.A., red.

[Modern international economic relations] Sovremennye mezhdunarodnye ekonomicheskie otnosheniia. Pod red. N.N.Liubimova. Moskva, Izd-vo "Mezhdunarodnye otnosheniia," 1964. 583 p.
(MIRA 17:5)

1. Moscow. Institut mezhdunarodnykh otnosheniy. 2. Predsedatel' Prezidiuma Vsesoyuznoy torgovoy palaty (for Nesterov).

PLETNEV, K.

New developments in the petroleum economy. Pozh.delo 5 no.7:
10-13 Jy '59. (MIRA 12:9)

1. Nachal'nik otdela Gosstroya SSSR.
(Petroleum engineering)

PLETNEV, S.

"A Reply to the Note of S. Mar ochev"; Zhur. Fiz. Khim., 12, No. 1, [illegible];

Report U-1611, 3 Jan. 1952.

PLETENEV, A.V.

Ustimovka Arboretum of the Botanical Garden of the Academy of Sciences of the Ukrainian S.S.R. Trudy Bot.sada AN URSR 3:24-27 '55. (MLRA 10:8)

(Ustimovka--Arboretums)